

AD A061103

(12)

ARI TECHNICAL REPORT
TR-78-A17

(6) Initial Strategies for the Tactical Operations System
(TOS) Support of the Command and Control Process,

Volume 3: Description of TOS Functions
at Brigade and Battalion

by

(10) B. R. Modisette
R. R. Michel
G. W. Stevens

LEVEL III

#05-8324

14 SDI-TM-6049/002/00

SYSTEM DEVELOPMENT CORPORATION
Santa Monica, California

(11) JUN 29 1978

(12) 155p

(9) Final Rept. 8 Feb 77-7 Feb 78

(15) Contract DAHC 19-77-C-3018

Steven R. Stewart, Technical Monitor
ARI Field Unit, Fort Leavenworth, Kansas

DDC

RECEIVED
NOV 18 1978
B

Prepared for



U.S. ARMY RESEARCH INSTITUTE
for the BEHAVIORAL and SOCIAL SCIENCES
5001 Eisenhower Avenue
Alexandria, Virginia 22333

(16) 2Q762722A765,
2Q263743A774

(18) ARI TR-78-A17

Approved for public release; distribution unlimited.

339 900

78

11-01

6

JOB

U. S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the
Deputy Chief of Staff for Personnel

JOSEPH ZEIDNER
Technical Director (Designate)

W. C. MAUS
COL, GS
Commander

Research accomplished
under contract to the Department of the Army

System Development Corporation

NOTICES

DISTRIBUTION Primary distribution of this report has been made by ARI. Please address correspondence concerning distribution of reports to U. S. Army Research Institute for the Behavioral and Social Sciences, ATTN PERI-P 5001 Eisenhower Avenue, Alexandria, Virginia 22333

FINAL DISPOSITION This report may be destroyed when it is no longer needed. Please do not return it to the U. S. Army Research Institute for the Behavioral and Social Sciences

NOTE The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER TR-78-A17	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) INITIAL STRATEGIES FOR THE TACTICAL OPERATIONS SYSTEM (TOS) SUPPORT OF THE COMMAND AND CONTROL PROCESS; Volume 3: DESCRIPTION OF TOS FUNCTIONS AT BRIGADE AND BATTALION	5. TYPE OF REPORT & PERIOD COVERED Final 8 Feb. 1977 - 7 Feb. 1978	
7. AUTHOR(s) B. R. Modisette, R. R. Michei, G. W. Stevens	6. PERFORMING ORG. REPORT NUMBER TM-6009/002/00	
9. PERFORMING ORGANIZATION NAME AND ADDRESS System Development Corporation 339 900 2500 Colorado Avenue Santa Monica, California 90406	8. CONTRACT OR GRANT NUMBER/ DAHC 19-77-C-0018	
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences (PERI-OL) 5001 Eisenhower Ave., Alexandria, VA 22333	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q762722A765 2Q26374A774	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	12. REPORT DATE June 1978	
	13. NUMBER OF PAGES 153	
	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Research monitored technically by Steven R. Stewart, ARI Field Unit at Fort Leavenworth.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Army Command Post Personnel Tactical Training Automation Computer Procedures Tactical Operations Battalion Elements Staff User System Brigade Function Strategies Tasks Command & Control Man/Machine Systems TOS		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The impact of the Tactical Operations System (TOS) on the procedures, personnel and skill requirements for the intelligence and operations elements at Army brigade and battalion command posts is discussed. Changes to the current TOS design that would enhance its usefulness to staff users in brigades and battalions are identified and defined. The material is useful for determining TOS training requirements at Army brigade and battalion levels and providing the rationale for detailed investigation of the feasibility and utility of proposed system enhancements.		

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

7 February 1978

i

System Development Corporation
TM-6009/002/00

TABLE OF CONTENTS

	Page
INTRODUCTION.....	1
BRIGADE INTELLIGENCE ELEMENT.....	4
BRIGADE OPERATIONS ELEMENT.....	50
BATTALION INTELLIGENCE ELEMENT.....	76
BATTALION OPERATIONS ELEMENT.....	114

LIST OF TABLES

Table

1	Brigade Intelligence Element Positions, Functions, and Tasks.....	9
2	Brigade S2 Manning.....	48
3	Brigade Operations Element Positions, Functions, and Tasks.....	53
4	Brigade S3 Manning.....	74
5	Battalion Intelligence Element Positions, Functions, and Tasks.....	79
6	Battalion S2 Manning.....	112
7	Battalion Operations Element Positions, Functions, and Tasks.....	117
8	Battalion S3 Manning.....	151

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
ACFT SECTION	<input type="checkbox"/>
DISTRIBUTION/AVAILABILITY	
DIST.	AVAIL. and/or SPEC.
A	

INTRODUCTION

This document contains descriptions of how selected staff elements within the brigade and battalion tactical operations center of a tactically deployed army division are expected to function using the Tactical Operations System (TOS). It is one of three volumes presenting the results and conclusions of a one year project.

The volume is organized by coordinating staff. The elements of the brigade are presented first followed by those of the battalion. The data presented for each element are intended to stand alone representing the TOS impact for that element.

An explanation of the format and data presented in the element descriptions is provided in subsequent paragraphs and was felt to be necessary to aid in interpreting and understanding some of the data items presented. The format and explanation of the element descriptions is as follows:

- General - Each element description begins with a preliminary statement identifying the element, who supervises its operations, where it is normally located, and the basic responsibilities of the element.
- Mission - The mission of the element is described in terms of its responsibility to the command post or the division.
- Overview of TOS operations - The initial part of the overview indicates where the element is resident within the command post, the consoles available to conduct TOS operations, and the functions and tasks to be accomplished on the TOS console(s). The remainder of the section is devoted to providing a general summary of how each of the functions and tasks could be supported by TOS capabilities.
- Functions and tasks - The functions and tasks section is the major portion of the element description. It contains a task matrix and functions and task descriptions. The task matrix is displayed in table form to show the relationships of element functions and tasks to element personnel who contribute to or perform the identified tasks. The table also indicates whether the task is to be conducted manually or to be TOS assisted. TOS assisted has been defined to mean that TOS capabilities will be used in task performance. A task was not considered to be TOS assisted if the operator merely obtains task input data from the TOS data base simply because that is where it will be stored or stores his task output in a TOS file for the same reason.

Individual descriptions are provided for the functions or tasks appearing in the element matrix. No task descriptions are provided, however, for those tasks dealing with the setup and checkout of TOS equipment because sufficient hardware information was not available to document those procedures. Each task described is documented using either a manual or a TOS assisted task format. The manual format is in keeping with the

original data collection forms and contains the task frequency estimate, criticality rating, duty positions that perform the task, inputs, outputs, coordination, and notes or comments pertaining to the task. Explanation of the various items may be found in Volume 1, Appendix B of this series. The manual task format does not include a description of how the task is or might be accomplished. The TOS assisted task format is more complete and contains sections on the man/machine interface requirements and task procedures in addition to the sections contained in manual task descriptions. The man/machine interface requirements section lists the computer capabilities required to perform the task. Any of six capabilities might be listed in this section. The six capabilities are defined as follows:

- Menu selection. The capability for an operator to select the TOS function, format, or file he wishes to use through an interactive dialog with the system.
- File access. Authorization granted an operator or position by the system controller to retrieve data from the TOS system files required as inputs to the task. The system controller will enter in a system file those positions authorized to access the various TOS data files.
- File update. Authorization granted an operator or position by the system controller to make data entries in those TOS files required as task outputs. The system controller will enter in a system file those positions authorized to use the TOS data files.
- Data transfer. The capability for an operator to transfer data from file to file, console to console, console to large screen display, file to console, and console to file.
- Graphics. The capability for an operator to specify a graphics display output for applicable items from TOS data files. It includes the capability to create display files and to select specific categories of items for display from display files.
- Attention device and threshold selection. The capability to specify alarm levels and display attention criteria.

The procedures section of TOS assisted tasks describes how the task might be accomplished using the identified TOS interface functions.

- Personnel - The personnel section of the element description provides a comparison of the doctrinal manning for manual operations to recommended manning for TOS operations. The data is presented in table format for ease of comparison. The doctrinal manning table was based on data taken from the Tactical Command and Control System Definition (TCATA FM 222 Support Package), Brigade and Battalion Organization and Functions Manual Baseline, ACN 23487, dated March 1977. The recommended TOS manning was predicated on data gathered from the surveyed FORSCOM Division, TOS task identification and projection, and the 12-hour shift requirements to sustain around-the-clock operations. The remainder of the section provides a description of personnel utilization to accomplish the tasks and fulfill the requirements of the two shift operation.

7 February 1978

3

System Development Corporation
TM-6009/002/00

- Recommendations - The recommendations provided within the element description are intended to improve the use of TOS within the element or to provide suggestions for new or modified TOS capabilities to support the element. Recommendations involving the overall system appear in Volume 1.

7 February 1978

4

System Development Corporation
TM-6009/002/06

BRIGADE INTELLIGENCE ELEMENT

GENERAL

The brigade intelligence (S2) element, supervised by the brigade S2 officer, is located in the brigade main command post tactical operations center. The investigated division had Army Security Agency (ASA) liaison, prisoner interrogation (IPW), and counterintelligence (CI) teams from division attached to their brigades. These specialized units were under the supervision of their respective agency headquarters at division, but the brigade S2 could coordinate their activities and utilize these assets as required. The element description that follows reflects the use of these attached assets.

The investigated division did not attach battlefield information coordination centers (BICCs) to their maneuver brigades. BICCs are augmentation teams of intelligence analysis personnel from the division combat intelligence company. They perform intelligence data integration, analysis, and production for brigades much like the analysis and production (A&P) element does at the division. This element description does not reflect the use of BICCs. However, where it was felt that the existence of a BICC would have made a difference in task performance, the difference is recorded in the notes section of the individual task description.

MISSION

The mission of the maneuver brigade S2 element is to keep the brigade commander, brigade staff, and subordinate units informed of the current enemy situation, terrain, and weather conditions. It also supplies higher echelons with combat information, coordinates the intelligence collection effort at brigade level, conducts some limited intelligence analysis, and advises the brigade commander and staff on intelligence matters affecting operational planning.

OVERVIEW OF TOS OPERATIONS

Under the current TOS hardware configuration, the brigade S2 element will have a TOS console assigned specifically to them. This console will be used to receive combat information and intelligence from division and to disseminate these data within the brigade command post and to subordinate battalions. The console will be used to receive combat information and information requests from subordinate units and to disseminate it within the brigade command post and to higher and adjacent commands. The console will also be used to receive and disseminate intelligence collection tasking (ICT) messages and to input intelligence collection requirement (ICR) messages. Further, the S2 TOS console

7 February 1978

5

System Development Corporation
TM-6009/002/00

will be used to retrieve data and create graphics displays useful as briefing and intelligence analysis aids. The TOS console might also be used to roll up ground surveillance and reconnaissance plans and preplanned air reconnaissance requests in TOS staff working files from battalions through brigades to division.

Division intelligence (G2) elements and TOS-equipped intelligence collection agencies will address appropriate TOS enemy situation data (ESD) file input messages to the brigade S2 console. The brigade S2 will also receive new inputs to the TOS enemy order of battle (EOB) and terrain (TER) files. In addition to receiving these messages as addressees, brigade S2 personnel will also establish TOS standing requests for information (SRIs) against the three files to force to their console new messages of particular interest to the brigade. If division maintains an intelligence summary staff working file, then brigade S2 personnel could periodically query that file to obtain the latest weather, terrain, and enemy situation summary data and projections as needed. When any of these division TOS intelligence messages are received at brigade, the S2 personnel will decide if the information would be appropriate for any or all subordinate battalions and will retransmit the messages to battalions as appropriate. They will disseminate TOS messages within the brigade command post via message transfer to another console, hardcopy, TOS graphics displays, and/or manual entry on a large scale acetate situation map. It is felt that brigade S2 elements will probably continue to maintain acetate situation maps because brigade will not have a TOS large screen display device and the TOS console display area is too small to be continually referenced by all brigade tactical operations center elements. It might be useful for brigade S2 personnel to maintain a current TOS graphics display of the EOB file entries that are in the brigade's area of interest. This display might be maintained on the commander's TOS console and used as the most current picture of the division's estimate of the enemy order of battle.

A brigade S2 element will have a hierarchical review capability allowing the review of TOS messages input by subordinate battalion S2s prior to forwarding the messages' entry into the TOS data base at the division main command post for final processing. This capability permits the brigade S2 to filter out redundant, unnecessary, and inefficient messages and requests, and thus reduce the probability of system overloads. Brigade S2 personnel will set TOS indicators for the types of battalion messages they wish to review and will be able to dynamically change these settings during the mission. Reviewed messages can be deleted, modified, or retransmitted for TOS processing without modification. Battalion message types that are not reviewed may still be received at brigade as information copies. The types of battalion S2 TOS inputs reviewed or received at brigade will include ESD and ICR input messages and queries and SRIs against the TOS files. Additional addressees might be added to battalion ESD messages for retransmittal. Brigade command post dissemination of battalion ESD inputs will use the same methods as discussed earlier for inputs coming down from the division.

7 February 1978

6

System Development Corporation
TM-6009/002/00

Brigade S2 personnel will receive TOS ICT messages from the division collection management and dissemination (CM&D) element. These ICT messages will be requesting information that can be collected by front line units. Brigade S2 personnel will determine which battalion(s) can collect the information and will retransmit the ICT to the appropriate battalion(s). Brigade S2 personnel will also submit TOS ICR messages to the division CM&D element when the brigade personnel request information that can not be readily collected by battalion or brigade assets or when brigade S2 intelligence analysis uncovers voids in our knowledge of the enemy.

Brigade S2 personnel might use the TOS data base in performing intelligence analysis. Although brigade S2 manning precludes extensive analysis work, S2 personnel might perform limited analysis if the required answers are time critical and can not wait for analysis by higher echelons. Brigade S2 personnel would query and SRI the ESD, EOB, and TER files to obtain data to aid in the analysis. They might also create TOS console graphics displays to better grasp the spatial relationships between events. Retrieved TOS data, graphics displays, and the contents of the intelligence summary staff working file will also be used as aids in creating and presenting the S2 portion of the brigade commander's briefing.

Two possible uses of TOS in rolling up division intelligence collection plans have been suggested in the division reconnaissance and surveillance (R&S) element description. These are the ground surveillance and reconnaissance plan and the preplanned air reconnaissance request plan that are entered by battalions and are rolled up through brigades to division. Battalion S2s would enter their ground surveillance and reconnaissance plans in a R&S-defined staff working file. They would enter their preplanned air reconnaissance requests in another R&S staff working file. When a battalion S2 completes his entries in either of these files he would notify the brigade S2 who would retrieve the completed entries for all his battalions. Brigade S2 personnel would modify and delete battalion entries as required. They would add brigade entries to the preplanned air reconnaissance file. Brigade S2 personnel would notify division R&S when the files were ready for division review.

The performance of many brigade S2 tasks will not be affected by TOS. Interaction with brigade-attached ASA, IPW, and CI assets will remain manual because these teams will not be equipped with TOS. In addition, it is anticipated that at least some intelligence reporting from battalions will continue to come over the intelligence radio net because there will be only one TOS console at battalions which must be shared among all battalion elements. As was stated previously, it is also felt that brigade S2 personnel will continue to manually maintain a large scale acetate enemy situation display due to the lack of a TOS large screen display device. Preparation of the intelligence annex to the brigade operations order(OPORD) will continue to be a manual process because of the size and essentially free text nature of the annex.

7 February 1978

7

System Development Corporation
TM-6009/002/00

(Page 8 blank)

Many brigade S2 tasks involve much coordination and require the flexibility of verbal communications. These tasks include coordinating fire support for reconnaissance patrols, coordinating brigade support for attached intelligence collection teams, interacting in the handling of important prisoners of war, coordinating brigade operations security, and participating in the planning of cover and deception and psychological warfare operations. Other brigade S2 tasks are administrative and do not qualify for TOS interaction because the system's purpose is to support tactical operations. These tasks include managing the distribution of maps, classified document accounting, and administering the security clearance program.

FUNCTIONS AND TASKS

Functions and tasks performed by the brigade intelligence element are addressed in this section. A matrix of the tasks and duty position relationships, indicating which tasks will remain manual and which will be TOS assisted, is included as Table 1.

Following the table are task description forms, one for each task, stating whether the task is manual or TOS assisted and providing information about frequency estimate, criticality, duty position affected, inputs to the task, coordination requirements, and task outputs. For tasks which are TOS assisted, the man/machine interface requirements are listed and procedures for performing the task are discussed.

7 February 1978

9
(page 10 blank)
TABLE 1.

Brigade Intelligence Element Positions, Functions and Tasks

FUNCTIONS AND TASKS	S2	Assistant S2
Plans, control, and coordinates the combat intelligence collection effort.		
Reviews and coordinates the ground reconnaissance and surveillance plans of subordinate units.	(X)	
Coordinates with the brigade fire support officer for fire support of reconnaissance patrols.	X	X
Determines brigade intelligence data collection requirements and performs the tasking.	(X)	(X)
Receives and analyzes tasking requests from higher headquarters.	(X)	(X)
Receives and analyzes tasking and information requests from subordinate units.	(X)	(X)
Determines availability status of collection means.	X	X
Requests communications security support and arranges necessary support for signal intelligence activities in the brigade zone or sector.	X	X
Performs analysis and processes all intelligence information received.		
Processes all intelligence reports from higher echelons and combat information from subordinate units.	(X)	(X)
Analyzes current combat information to answer questions and to determine additional information requirements.	(X)	(X)

Brigade Intelligence Element Positions, Functions, and Task

AND TASKS	S2	Assistant S2	Intelligence Sergeant	Personnel Carrier Driver (RTO)	Light Vehicle Driver (RTO)
combat intelligence collection					
reconnaissance and surveillance	(X)		(X)	X	X
support officer for fire support	X	X			
data collection requirements and	(X)	(X)	(X)	X	X
requests from higher headquarters.	(X)	(X)	(X)		
information requests from	(X)	(X)	(X)	X	X
collection means.	X	X	X	X	X
support and arranges necessary activities in the brigade zone	X	X		X	X
intelligence information received.					
from higher echelons and combat	(X)	(X)	(X)	X	X
on to answer questions and to requirements.	(X)	(X)	(X)	X	X

7 February 1978

11
(page 12 blank)

TABLE 1. (Continued)
Brigade Intelligence Element Positions, Function

FUNCTIONS AND TASKS	Assistant	
	S2	S2
Reports, disseminates, and publishes intelligence-related material.		
Prepares and presents the intelligence portion of the commander's briefing.	(X)	(X)
Prepares and publishes the intelligence portions of the brigade OPORD.	X	
Supervises the distribution of maps provided from higher headquarters.		
Provides planning information to the S3 for cover and deception operations.	X	
Provides advice to the brigade commander and staff on operational security.	X	
Coordinates counterintelligence activities and services.		
Supervises the control and accounting of classified documents and material.		
Administers the security clearance program.		
Requests and supervises, as needed, counterintelligence investigation and security support.	X	X
Coordinates human intelligence exploitation activities.		
Facilitates attachment of counterintelligence and prisoner interrogation assets from division.	X	X
Coordinates with the brigade S3 on planned or proposed psychological warfare activities.	X	X

TABLE 1. (Continued)
Brigade Intelligence Element Positions, Functions, and Tasks

AND TASKS	S2	Assistant S2	Intelligence Sergeant	Personnel Carrier Driver (RTO)	Light Vehicle Driver (RTO)
intelligence-related material.					
ence portion of the commander's	(X)	(X)			
gence portions of the brigade	X				
s provided from higher headquarters.			X		
the S3 for cover and deception	X				
mander and staff on operational	X				
ivities and services.					
ing of classified documents and			X		
program.			X		
, counterintelligence invest-	X	X			
itation activities.					
elligence and prisoner interro-	X	X			
planned or proposed psychological	X	X			

7 February 1978

13
(page 14 blank)

TABLE 1. (
Brigade Intelligence Element Position

FUNCTIONS AND TASKS	S2
Coordinates with the brigade S1, S3, and S4 concerning the evacuation and disposition of prisoners of war and others held by the brigade.	X
Performs the hookup, energizing, initialization, and checkout of the TOS console.	
X - Manual Task	
<input checked="" type="radio"/> - TOS Assisted Task	

TABLE 1. (Continued)
Brigade Intelligence Element Positions, Functions, and Tasks

AND TASKS	S2	Assistant S2	Intelligence Sergeant	Personnel Carrier Driver (RTO)	Light Vehicle Driver (RTO)
3, and S4 concerning the evacuation r and others held by the brigade.	X	X			
tialization, and checkout of the			(X)	X	X

7 February 1978

15

System Development Corporation
TM-6009/002/00

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Reviews and coordinates the ground reconnaissance and surveillance plans of subordinate units.

FREQUENCY ESTIMATE: Once per day

CRITICALITY: 4

DUTY POSITION: S2, Intelligence Sergeant, Personnel Carrier Driver (RTO),
Light Vehicle Driver (RTO)

INPUTS

- Battalion daily ground reconnaissance and surveillance plans
- Brigade mission intelligence needs as contained in the OPORD intelligence annex or as developed during the mission
- Terrain maps for studying patrol routes and surveillance radar coverage

COORDINATION

Inputs: Battalion S2s

Outputs: ● Division R&S element
● Battalion S2s

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- Graphics
- File update

PROCEDURES

- TOS assisted - If R&S at division creates a staff working file for "rolling up" reconnaissance and surveillance plans as suggested in the R&S element description, then a brigade S2 would receive the plans as entered as a record in the file by each of his battalion S2s. If an individual battalion's plan requires no more than one record, then it will probably be transmitted directly to the brigade S2 console after composition.

- TOS assisted - Brigade S2 personnel will hardcopy each battalion plan. They might then build a TOS console graphics display or use an acetate map to illustrate patrol objective locations and timing as well as ground surveillance radar (GSR) locations and coverage. They will compare the plans of each battalion, looking for duplications in patrol activity and critical gaps in GSR coverage. They will decide if the proposed GSR placements might give away friendly unit positions. They might look at each proposed foot patrol to decide if it is practical in terms of terrain, objectives, timing, and mission requirements. They might discuss brigade first echelon intelligence needs with the brigade S3 to see if the proposed battalion patrols could collect any additional information for the brigade. Any suggested changes to a battalion's plan will be coordinated with the battalion S2 and, if agreed upon, the change to the TOS staff working file record should be made by the battalion S2 when plans are completed.
- TOS assisted - Brigade S2 personnel might use a TOS relay message or voice communications to inform division R&S when the brigade's ground reconnaissance and surveillance plans are ready for division review. R&S can then retrieve the records from the staff working file. R&S will inform the brigade S2 of any changes to the brigade's plan that are desired by division. The brigade S2 would in turn coordinate the desired changes with the affected battalion S2s. Again, the affected battalion S2 should probably make the change to the staff working file.

OUTPUTS

The outputs of this task would be entries and updates to a staff working file, voice communications, and possibly TOS relay messages.

NOTES

- Battalion ground reconnaissance and surveillance plans typically contain GSR locations and right and left fan coverage plus, for each ground patrol, the type of patrol, the unit involved, the objective location, the departure time and location, and the return time and location.
- The value of using TOS to roll up ground reconnaissance and surveillance plans would be in reducing the time required to transmit these plans between echelons, thus increasing the changes of modifying plans before they can be implemented.

7 February 1978

17

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Coordinates with the brigade fire support officer for fire support of reconnaissance patrols.

FREQUENCY ESTIMATE: No more than once a day

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

Patrol order showing the mission, situation, timing, and routes for a foot patrol. Complete patrol orders would typically come from battalion S2s via courier.

OUTPUTS

- Information on where a foot patrol will be at what time is passed verbally to the brigade fire support officer
- A copy of the complete patrol order might be given to the fire support officer

COORDINATION

Inputs: Battalion S2

Outputs: Brigade fire support officer

NOTES

- Battalion typically coordinates the fire support for its patrols with its attached artillery battery. However, if there is a battalion in reserve, its attached battery acts in general support of the brigade. It is this battery that must be informed by brigade of the location and timing of foot patrols.
- The brigade fire support officer typically passes this information to division artillery (DIVARTY).
- This is a simple face to face coordination task that does not qualify for TOS interaction.

7 February 1978

18

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Determines brigade intelligence data collection requirements and performs the tasking.

FREQUENCY ESTIMATE: 12 to 24 tasking requests per shift

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- TOS ESD and EOB file information which is a stimulus for generating brigade intelligence data collection requests
- Written reports received from brigade-attached collection assets and from battalions which might generate additional collection requests
- Verbal requests for intelligence data collection received from the brigade commander, brigade operations (S3) element, or other brigade elements
- Personal knowledge of collection asset capabilities
- Knowledge of the current status of brigade-attached collection assets gained from contact with the asset or asset liaison personnel

COORDINATION

Inputs: ● Brigade commander
 ● Brigade S3
 ● Brigade air liaison officer
 ● Other brigade tactical operations center elements
 ● Brigade-attached collection assets, including elements of the ASA, IPW, and CI

Outputs: ● Brigade air liaison officer
 ● Brigade aviation section
 ● Battalion S2s
 ● Brigade-attached collection assets, including elements of ASA, IPW, and CI

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- TOS assisted - Brigade staff discussions concerning TOS messages and console displays depicting the current enemy situation and events will lead to requests for additional information. Brigade S2 personnel will query the TOS data base to determine if the desired information already exists. If the queries come back empty, S2 personnel will decide if the information can be gathered by brigade-attached assets or the brigade's maneuver battalions, or if they must request that division, corps, or adjacent brigade assets collect the information. If they decide to request data collection from higher or adjacent echelons, they will enter a TOS intelligence collection requirement message that will be used by the CM&D element at division to task collection agencies. Brigade S2 personnel should receive an ESD message(s) reporting the results of the requested data collection, but they might also enter an SRI to route to their console any other messages that might come in on the particular subject.
- Manual - If the requested information can be collected by brigade-attached assets, these assets will be tasked via voice communications. The verbal and written reports generated by these assets might create requests for additional data collection. ASA, IPW, and CI assets will be given general verbal tasking requests. Requests for immediate aerial reconnaissance will consist of verbally informing the brigade air liaison officer of the route or area to be covered and the specific reconnaissance objectives. The air liaison officer will submit a formal request via air force radio. Reconnaissance requests for brigade organic army aviation will be cleared through the brigade commander.
- Manual - Additional brigade tasking for proposed battalion ground patrols will probably be accomplished via verbal communications at the time the battalion ground reconnaissance and surveillance plans are reviewed as described in an earlier task. If the brigade needs a battalion ground patrol, then the brigade S2 will draft a patrol order explaining the mission, friendly and enemy situation, and any execution details that can not be supplied by the tasked battalion. The patrol order might be sent to battalion via radio or courier.
- TOS assisted - Preplanned requests for air force reconnaissance missions might be rolled up in a staff working file as described in the division R&S element description. Battalions would enter their air reconnaissance requests for the next day in a division staff working file that contains all of the essential items of a formal air reconnaissance request with one request per file record. When a battalion S2 has entered all of his requests, he would

7 February 1978

20

System Development Corporation
TM-6009/002/00

inform the brigade S2 via radio or a TOS relay message. Brigade S2 personnel would query the file to retrieve and hardcopy their battalions' requests. Brigade S2 personnel, probably assisted by the brigade air liaison officer, would review the battalion requests, combining them where possible and changing priorities where appropriate. They would inform battalion S2s of the changes. Brigade S2 personnel would add brigade requests and inform the division R&S element when the entire brigade request "package" would be ready for division review. Brigade S2 would be informed of any changes made at division or corps level. If TOS is not used for rolling up preplanned requests, they will be recorded on standard air reconnaissance forms and passed between echelons via courier.

OUTPUTS

The outputs of this task are TOS queries, ICR messages, SRIs, the responses to queries, and entries and updates to a TOS staff working file. Also output are voice and written communications.

NOTES

- Intelligence tasking generated by brigade for brigade-attached assets and for maneuver battalions will not involve TOS interaction. Only the tasking brigade requests from division, corps, and adjacent brigades will be handled via the TOS intelligence collection management function.
- If a brigade does not have attached ASA, IPW, or CI elements, the great majority of its tasking requests would be via TOS through the division CM&D element.

7 February 1978

21

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Receives and analyzes tasking requests from higher headquarters.

FREQUENCY ESTIMATE: Maybe once a shift

CRITICALITY: 4

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant

INPUTS

- Essential elements of information (EEI) and other information requirements (OIR) contained in the division OPORD intelligence annex
- TOS ICT messages received from the division CM&D element

COORDINATION

Inputs: Division CM&D element

Outputs: Maneuver battalion S2s

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- Data transfer

PROCEDURES

- Manual - Brigade S2 personnel will study the EEI and OIR contained in the division OPORD intelligence annex. If certain EEI and OIR seem suitable for battalion collection, the brigade S2 might add specific detail or modify them to match the battalion's capabilities and place them in the brigade OPORD.
- TOS assisted - Brigade S2 personnel will receive TOS ICT messages from the CM&D element at division. The ICT messages will contain requests for information that could be collected by front line troops. Brigade S2 personnel might add any required detail to the ICT message before retransmitting it to the appropriate battalion(s). Brigade S2 personnel might maintain hardcopies of the ICT messages and a written list of the ICT numbers to aid in monitoring the battalion responses (i.e., ESD messages) and to insure that the responsive ESD messages carry the correct corresponding ICT number and addressees.

7 February 1978

22

System Development Corporation
TM-6009/002/00

OUTPUTS

The outputs of this task are modified and retransmitted TOS ICT messages.

NOTES

- In the investigated division, individual tasking is not often sent to maneuver brigades from division. Division is primarily concerned with enemy rear areas deeper than lower echelons can gather data.
- Brigade S2s should not receive ICT messages from division for tasking directed toward any brigade-attached collection asset such as ASA, IPW, or CI teams.
- This tasking should be routed through the asset's element at division to avoid duplicate tasking.

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Receives and analyzes tasking and information requests from subordinate units.

FREQUENCY ESTIMATE: Unknown (see notes)

CRITICALITY: 3

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- TOS ICR messages received from the brigade's maneuver battalions
- TOS queries and SRIs generated by the brigade's maneuver battalions
- Other information requests received from maneuver battalions over the brigade intelligence radio net

COORDINATION

Inputs: Maneuver battalion S2s

Outputs: ● Maneuver battalion S2s
● Division intelligence elements

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu Selection
- File access
- Data transfer
- File update

PROCEDURES

- TOS assisted - Brigade S2 personnel will decide which types of battalion-generated TOS messages they want to review before those messages enter the TOS data base at the division main command post. It is envisioned that they will be able to indicate in a TOS system file which message types they wish to review and dynamically change the file entries in accordance with the current situation. TOS message types not designated for review might be copied at brigade but allowed to enter system processing without brigade

approval. It is felt that battalion-generated ICR messages, queries, and SRIs should generally be among the messages reviewed because of the effects of duplicate and inefficient requests on TOS operations.

- TOS assisted - Brigade S2 personnel will have the designated battalion messages routed to their console. They will study the queries, SRIs, and ICR messages to determine if they are well composed, if the requested information is really necessary, and if the request duplicates one made by brigade or another battalion. They may alter the message before retransmitting it to the system, allow it to go as is, or delete it. Deleted messages should be coordinated with the battalion S2, if possible.
- Manual - Battalion information requests directed to brigade should come over the brigade radio net. Brigade S2 personnel will answer the request, via radio, based on locally available information or information gained from brigade-attached collection assets. Brigade may have to enter TOS queries to answer the request.

OUTPUTS

The outputs of this task are entries to a TOS message review identification system file, queries, SRIs, ICR messages, and verbal communications.

NOTES

- Up to 15 battalions might be users of a division TOS data base. It would appear necessary to control their use of the system to avoid system overloads.
- If a brigade has an attached BICC element, then the BICC should be able to answer many battalion requests without individual queries to the TOS data base.
- Brigade monitoring of battalion inputs to the TOS ESD file is covered in a later task.

7 February 1978

25

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Determines availability status of collection means.

FREQUENCY ESTIMATE: 1 or 2 times per day

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- Status of available air force reconnaissance missions from the brigade air liaison officer via face to face verbal request
- ASA team equipment status change from the brigade ASA liaison team via verbal communications
- Status of organic army aviation assets via face to face request to the brigade aviation officer
- Status of brigade attached CI and IPW teams from face to face or telephonic communications
- Availability of battalion ground patrols for tasking from coordination with the S3

OUTPUTS

No formal output. The interviewed S2 at the investigated division keeps no formal status records, but "keeps the status in mind" when making tasking decisions.

COORDINATION

Inputs: • Brigade air liaison officer
 • ASA liaison team
 • Brigade aviation officer
 • Brigade-attached CI team
 • Brigade-attached IPW team
 • Brigade S3

Outputs: No direct outputs

7 February 1978

26

System Development Corporation
TM-6009/002/00

NOTES

- The ASA liaison team keeps the brigade S2 informed of any status change on their equipment. The S2 normally asks for status on the other assets when he is tasking them.
- If a brigade does not have attached ASA liaison, or IPW and CI teams, tasking of these agencies would be through division CM&D and brigade would not be aware of their status.
- This task, as performed at brigade, is not complex enough to justify TOS storage of asset status. The status of the few assets available to brigade can apparently be maintained mentally.

7 February 1978

27

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Plans, controls, and coordinates the combat intelligence collection effort.

TASK: Requests communications security support and arranges necessary support for signal intelligence activities in the brigade zone or sector.

FREQUENCY ESTIMATE: Once a day, or less

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- Notification by ASA liaison team or ASA platoon leader that a signal intelligence team is moving into a particular brigade-controlled area
- The brigade S2 in the investigated division routinely requests communications security support. There is no specific stimulus.

OUTPUTS

- Radio message to battalion S2 informing him that an ASA signal intelligence team will be operating in his area and requesting that he support them with mess, gas, and infantry as required.
- Request to the division combat intelligence company or signal security (SIGSEC) element for communications security support. These requests are normally made through the division Ops/CM&D element.

COORDINATION

Inputs: ASA liaison team or the ASA platoon leader

Outputs:

- Battalion S2s
- Division combat intelligence company or SIGSEC element

NOTES

- ASA signal intelligence teams do not have their own combat power and it is vital that they and their equipment not be captured. Thus, support of these units is critical.
- This coordination task requires the flexibility of verbal communications and does not qualify for TOS interaction.

7 February 1978

28

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Performs analysis and processes all intelligence information received.

TASK: Processes all intelligence reports from higher echelons and combat information from subordinate units.

FREQUENCY ESTIMATE: 50 per shift

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- TOS ESD messages received from battalions
- TOS ESD, EOB, and TER file messages received from division
- Enemy situation summary and weather data retrieved from the intelligence summary TOS staff working file, if kept by division
- Division OPORD intelligence annex received via courier
- Spot reports received from battalion via the intelligence radio net

COORDINATION

Inputs: ● Battalion S2s
 ● Division A&P element for EOB, TER, and intelligence summary file messages
 ● Any echelon, element, or agency making inputs to the ESD file that are transmitted to brigades

Outputs: ● Battalion S2s
 ● Any echelon, element, or agency using battalion and brigade inputs to the ESD file

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Data transfer
- Graphics

PROCEDURES

- TOS assisted - Brigade S2 personnel will decide if they want to review battalion ESD inputs before these messages are processed by the system. If so, it is envisioned that they will be able to retrieve a TOS system file and set a review status for ESD messages originated from their battalions. It is felt that brigade review of battalion ESD inputs will be dropped during times of heavy activity to preclude input bottlenecks. When battalion ESD messages are not being reviewed, they will be hardcopied at brigade for monitoring and analysis purposes.
- TOS assisted - If brigade S2 personnel are reviewing battalion S2 inputs, they will receive a console display of every ESD message generated by their battalions. They might speak to the originating battalion S2 if the message is unclear, or seems unlikely, and modify or delete the message accordingly. They might add additional addressees. They might also combine several battalion messages that report the same event before retransmitting it forward. Any combined message should state in the remarks the amount and source of messages on which it is based for reliability and validity confirmation determinations by message users. Approved messages will be retransmitted for system processing after being hardcopied.
- TOS assisted - Brigade S2 personnel will receive ESD and TER messages input by higher and adjacent echelons either in response to brigade S2 SRIs or as a result of having the message addressed to them. They will determine if the message should be retransmitted to any or all battalions and will add the additional addressees and retransmit as appropriate. They will hardcopy all messages.
- TOS assisted - Brigade S2 personnel will receive updates to the EOB file concerning enemy units within the brigade's area of interest. A console graphics display of enemy unit locations might be maintained by creating a graphics display from EOB file entries and making changes as new file entries are received. Brigade S2 personnel might also retrieve any enemy unit location display file maintained by the A&P element at division. They would then define the corners of their console displays to display just those units from the file that are in their area of interest. It is suggested that the commander's console be used for graphics displays, leaving the S2 and S3 consoles always available as input and output devices.
- Manual - Brigades might still find it necessary to maintain large acetate situation maps because the console display area will be too small to be used for constant reference by all brigade elements, for briefing more than one or two individuals at a time, or for displaying any more than minimal EOB information. If this is the case, a hardcopy of appropriate EOB and ESD messages could be taken off the S2 console and handed to a plotter for inclusion on the acetate situation map.

7 February 1978

30

System Development Corporation
TM-6009/002/00

- TOS assisted - If an intelligence summary staff working file is maintained as recommended in the A&P element description, brigade S2 personnel might periodically query appropriate portions of the file. They could thus obtain the latest division estimates of the current and projected enemy situation as well as the latest weather conditions and forecasts. This hardcopied information would be disseminated within the brigade command post as appropriate. If an intelligence summary file is not maintained, the brigade would receive weather information via radio net and intelligence conclusions via individual ESD, EOB, and TER messages and queries.
- Manual - Brigade S2 personnel, after hardcopying incoming TOS messages, will decide which command post elements should receive the message. It may be necessary to make handcopies of a message for distribution. Hardcopy of all TOS messages will be maintained by the S2 section for the journal.
- TOS assisted - It is anticipated that some intelligence traffic will continue to come from battalions over the intelligence radio net due primarily to unavailability of the single battalion TOS console. These messages will be copied, entered in the journal, and distributed within the battalion command post, as appropriate. Brigade S2 personnel will translate appropriate radio messages into TOS ESD input messages addressed to affected units and elements.
- Manual - The division OPORD will be received via courier. The OPORD intelligence annex will be retained and reviewed by brigade S2 personnel and used in developing the brigade intelligence annex as described in a later task.

OUTPUTS

The outputs of this task are updates to a TOS message review identification system file, TOS ESD messages, TOS graphics displays, acetate situation maps, journal updates, and verbal communications.

7 February 1978

31

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Performs analysis and processes all intelligence information received.

TASK: Analyzes current combat information to answer questions and to determine additional information requirements.

FREQUENCY ESTIMATE: Up to 20% of officers' time at the investigated division (see notes)

CRITICALITY: 4 (see notes)

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Personnel Carrier Driver (RTO), Light Vehicle Driver (RTO)

INPUTS

- TOS ESD messages received from subordinate and higher echelons
- TOS ESD, EOB, and TER file contents
- TOS graphics displays of the enemy situation
- Acetate situation map, if kept
- Verbal and written reports received from brigade-attached collection assets
- TOS intelligence summary staff working file and the written division and brigade OPORD intelligence annexes for information on the mission, enemy situation, weather, and terrain
- Published intelligence documents on enemy organization, tactics, and equipment

COORDINATION

Inputs: None. Existing data from preceding task is used.

Outputs: ● Any brigade command post element requesting or needing the analysis results

- Battalion S2s
- Division G2 elements

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- Graphics
- File update

PROCEDURES

- TOS assisted - Incoming ESD messages from higher and lower echelons and verbal and written reports from brigade-attached assets will be compared with the TOS situation graphics display and/or the acetate situation map to determine if they make sense in light of the current situation. If not, the submitting unit/agency might be contacted, via non-TOS communications, and asked for clarifying information. If appropriate, the new event might temporarily be added to the TOS graphics display to aid in the comparison.
- Manual - Brigade S2 personnel might reference the S2 journal and retrieve hardcopy of previously recorded TOS and radio messages that might aid in analyzing the new report.
- TOS assisted - Brigade S2 personnel might query the ESD, EOB, TER, or intelligence summary staff working file to retrieve information not already in their possession to aid in analyzing the new report. This additional information might temporarily be added to the TOS graphics display to aid in the analysis.
- Manual - Brigade S2 personnel might reference intelligence manuals to check the composition of a particular type of enemy unit, the tactical indicators for a particular enemy intention, or the characteristics of a particular type of enemy equipment to aid in their analysis.
- Manual - Brigade S2 personnel will compare the new report with the gathered data and draw conclusions as to what it indicates and its probable effects on friendly operations. They will inform any affected brigade command post element of their analysis results.
- TOS assisted - Brigade S2 personnel might submit a TOS ESD message reporting their analysis results. The ESD message would be addressed to any unit or division element they feel could use the information. If they do not submit an ESD message, they still might inform battalion S2s of the analysis results via non-TOS communications. If their analysis results affect enemy order of battle or terrain information, they will inform division G2 A&P personnel via non-TOS communications.

OUTPUTS

The outputs of this task are TOS queries, the responses to these queries, TOS graphics displays, TOS ESD messages, and verbal communications.

NOTES

- It is suggested that maneuver brigade S2 elements not directly update the EOB, TER, or intelligence summary staff working files. These are finished intelligence analysis product files whose content should be controlled by one group of individuals to avoid confusion and contradiction.
- The brigade personnel interviewed stated that analysis of combat information is not really a brigade function but it is done because time is often not available to wait for analysis performed by division and higher echelons. It may be that the investigated brigade did more analysis than is typical.

7 February 1978

33

System Development Corporation
TM-6009/002/00

If a brigade has an attached BICC, it is doubtful that the brigade S2 would perform analysis.

- ● The low criticality assigned to this task reflects the duplication of analysis performed at division level. Criticality might be higher on individual time-sensitive items which can not wait for division analysis.
- ● The brigade personnel interviewed stated that they typically accept the message reliability and validity ratings assigned by reporting battalions. Thus, no procedures for altering these ratings were included in this task.
- ● It is suggested that brigade S2s not submit ESD messages on reports provided by attached ASA, IPW, and CI agency assets if those reports will also go up the agency's channels. This would avoid duplicate ESD messages by brigade and agencies.

7 February 1978

34

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S2

FUNCTION: Reports, disseminates, and publishes intelligence-related material.

TASK: Prepares and presents the intelligence portion of the commander's briefing.

FREQUENCY ESTIMATE: Briefing is given at start of the mission with follow-ons as required

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

- Verbal or handwritten summary of the activities of brigade-attached ASA, IPW, and CI assets, and supporting SIGSEC assets
- Division and brigade OPORD intelligence annexes
- TOS graphics displays of the enemy situation
- Hardcopy of previously received TOS ESD, EOB, and TER file data
- Written spot reports from battalions
- TOS intelligence summary staff working file contents, if kept

COORDINATION

Inputs: Brigade-attached assets for their activity summaries. Otherwise, existing information is used.

Outputs: All brigade elements attending the commander's briefing

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Graphics

PROCEDURES

- Manual - Brigade S2 personnel will take notes from the division and brigade OPORD intelligence annexes on the enemy situation, weather, and terrain to use in the initial mission briefing.

- TOS assisted - Brigade S2 personnel will query the intelligence summary staff working file, if kept, to obtain the latest division intelligence summary and conclusions as well as the latest weather data for the briefing. They might check the hardcopy of previously received TOS messages to obtain brigade-specific clarifying information concerning the summary and conclusions contained in the division's intelligence summary file. They might query the TOS ESD, EOB, and TER files to obtain further clarifying data.
- Manual - Brigade S2 personnel might check the hardcopy of ESD messages and spot reports submitted by battalion S2s and take notes on individual battalion intelligence situations. They might also talk to battalion S2s via non-TOS communications to obtain situational summaries.
- TOS assisted - If display file storage is available, brigade S2 personnel might create new enemy situation TOS graphics displays to use during the briefing. These might graphically portray the relationships between various events such as enemy troop movements, artillery locations, or electronic intelligence equipment locations. Brigade S2 personnel will develop manual acetate overlays for the large manual situation map. These will depict the enemy situation and weather and terrain data.
- TOS assisted - The S2 or assistant S2 will conduct the S2 portion of the briefing using the previously gathered notes and displays. It is felt that the acetate situation map will be used for the majority of the briefing because the TOS console display is too small to brief more than one or two individuals at a time. However, precreated TOS displays might be used to give at least the commander and the executive officer additional graphics data.

OUTPUTS

The output of this task is the S2 portion of the commander's briefing consisting of handwritten notes, acetate displays, and TOS graphics displays.

NOTES

- In the initial mission briefing, the S2 briefs on the enemy situation, weather, and terrain taken primarily from the intelligence annex of the division OPORD. Follow-on briefings deal primarily with continuing problems and recent events.
- The maintenance of a division intelligence summary staff working file might reduce the number of S2 briefings required as current intelligence summary data would always be available for the commander's use.
- The original manual task on which this task is based also discussed the S2 situation report (SITREP). SITREPs should not be required under TOS because the data contained in them, such as enemy front line trace and estimated enemy losses, should be input as ESD messages and be retrievable from the file for analysis.
- Brigade S2 personnel might be involved in making some enemy situation inputs to the S3's battlefield information report (BIR) although the BIR was not sufficiently defined at the time of this writing to estimate the S2's involvement.

7 February 1978

36

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Reports, disseminates, and publishes intelligence-related material.

TASK: Prepares and publishes the intelligence portions of the brigade OPORD.

FREQUENCY ESTIMATE: Less than one per day

CRITICALITY: 4

DUTY POSITION: S2

INPUTS

- Intelligence annex to the division OPORD
- Intelligence annex in the basic brigade operations plan (OPLAN)
- S2 situation map for posting data taken from the division OPORD

OUTPUTS

Edited copy of the division intelligence annex given to the brigade S3 for integration with the rest of the OPORD

COORDINATION

Inputs: None. Use existing data.

Outputs: Brigade S3

NOTES

- In the field, brigade OPORDs are published as fragmentary orders with reference to the basic brigade OPLAN.
- Brigade S2 personnel post the enemy situation data from the division OPORD intelligence annex on the situation map. The S2 determines which posted units oppose the brigade and which posted units could reinforce in the brigade area within the mission time frame. The S2 also extracts the terrain and weather data that apply to the brigade area. He handwrites this information or edits a copy of the division intelligence annex and hands it to the brigade S3.
- The TOS EOB file could be used to create a console graphics display to make the enemy unit status determinations. Terrain and weather data could be extracted from TOS also. However, the investigated brigade personnel stated that they usually use the division intelligence annex as it is.

7 February 1978

37

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Reports, disseminates, and publishes intelligence-related material.

TASK: Supervises the distribution of maps provided from higher headquarters.

FREQUENCY ESTIMATE: Rarely. Only when they move long distances or maps are destroyed.

CRITICALITY: 3. Would probably have some maps, although not the right scale.

DUTY POSITION: Intelligence Sergeant

INPUTS

- Basic load authorization as determined by the Department of the Army and provided by division
- Staff map requirements determined by asking each brigade command post element or receiving a request for more maps
- Requests for maps given to the headquarters company supply clerk who orders them through brigade logistics (S4) channels

OUTPUTS

- Maps received and distributed
- Extra maps carried by S2 for resupply

COORDINATION

Inputs: Any brigade command post element

Outputs: Any brigade command post element

NOTES

- The brigade S2 supervises map distribution for the brigade staff only. Battalions determine and request their own map supplies, but brigade helps them with extra maps from brigade supply if necessary.
- Special relief, elevation, or road maps needed by brigade would be ordered through channels in the same manner as regular maps.
- This is an administrative task and does not qualify for TOS interaction.

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Reports, disseminates, and publishes intelligence-related material.

TASK: Provides planning information to the S3 for cover and deception operations.

FREQUENCY ESTIMATE: Rare

CRITICALITY: 2

DUTY POSITION: S2

INPUTS

- Stimulus for planning such an operation is usually a request from the brigade commander or S3
- Mission of brigade
- Current and projected enemy situation as taken from the S2 situation map, TOS graphics displays, and hardcopy of TOS messages and spot reports
- Personal knowledge of enemy doctrine and tactics

OUTPUTS

- Verbal or handwritten advice and plans given to the S3. Sometimes the S2 assists in the actual writing of the fragmentary order describing the operational requirements. The fragmentary order will state the deception desired and what each unit is to do. Details for task accomplishment are left up to the units involved.
- The S2 might participate in briefing the commander about the operation.

COORDINATION

Inputs: ● Brigade commander
● S3

Outputs: ● Brigade commander
● S3

NOTES

- The development and planning of cover and deception operations is considered to be a division responsibility, but brigade might occasionally develop its own.
- The actual development of the plan is primarily a coordination task requiring the flexibility of verbal communications and does not qualify for TOS inter-action.

7 February 1978

39

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Reports, disseminates, and publishes intelligence-related material.

TASK: Provides advice to the brigade commander and staff on operational security.

FREQUENCY ESTIMATE: At least daily

CRITICALITY: 2

DUTY POSITION: S2

INPUTS

- Information on communications security violations and poor communications practices plus recommendations for improving communications security from the supporting SIGSEC team
- Information on physical security problems, enemy espionage, sabotage and subversion operations in the area, and recommendations for improving security from the attached CI team
- Personal observations of problems with communications security, camouflage, noise and light discipline, personnel security, and physical security of sensitive equipment and materiel
- Information on operations security contained in the field standing operating procedures
- Discussions with the S3 concerning identified operations security problems and how to eliminate them

OUTPUTS

- Reporting of SIGSEC and CI activities, problems in operations security, and recommended solutions and improvements presented to the commander and brigade staff during the regular briefings
- Reporting of operations security problems and recommended solutions to the commander and/or the affected staff officer any time such problems arise

COORDINATION

- Inputs:
- S3
 - Brigade-attached SIGSEC team
 - Brigade-attached CI teams

- Outputs:
- Brigade commander
 - Any brigade staff element

7 February 1978

40

System Development Corporation
TM-6009/00L/00

NOTES

- Operations security is an S2 and S3 joint function but everyone must be familiar with and practice good operations security procedures.
- This is a physical investigation and close coordination task which does not qualify for TOS interaction.

7 February 1978

41

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Supervises the control and accounting of classified documents and material.

FREQUENCY ESTIMATE: Rare

CRITICALITY: 2

DUTY POSITION: Intelligence Sergeant

INPUTS

- DA form 445
- Classified document

OUTPUTS

Incoming document:

- Document given to requesting individual
- Receipt filed in proper container

Outgoing document:

- Completed receipt with document number, date, subject, number of classified pages, and recipient
- Document with copy of receipt sent to requester
- Copy of receipt filed in proper container

COORDINATION

Inputs: Brigade command post element transferring document

Outputs: Brigade command post element transferring document

NOTES

This is an administrative task of low frequency which does not qualify for TOS interaction.

7 February 1978

42

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Administers the security clearance program.

FREQUENCY ESTIMATE: Very rare in tactical situation. Most replacements should have their own papers.

CRITICALITY: 4

DUTY POSITION: Intelligence Sergeant

INPUTS

- Security forms filled out by newly assigned brigade headquarters personnel
- Security forms received on new battalion headquarters personnel along with any local file checks
- Medical records for screening, if available

OUTPUTS

Completed security forms sent to division

COORDINATION

Inputs: ● Newly assigned brigade headquarters personnel
 ● Battalion S2s

Outputs: Division G2 Ops/CM&D element

NOTES

This is an administrative task of low frequency and low criticality which does not qualify for TOS interaction.

7 February 1978

43

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Requests and supervises, as needed, counterintelligence investigation and security support.

FREQUENCY ESTIMATE: Rare, probably less than once a day, but could be frequent if there is much enemy rear area activity.

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

- Stimulus is occurrence of some event within the brigade area requiring CI investigation, such as possible compromise of classified data, or possible espionage, sabotage, or subversion event as reported by any brigade element or unit
- Report of investigation from the CI team
- Report of routine activities of CI team, including periodic security checks of brigade units, security checks of the command post while in transit, and security checks of abandoned command post locations

OUTPUTS

- Directions given to CI team to investigate a reported incident
- Directions given to CI team to perform standard security check of a specific subordinate unit
- TOS ESD message sent to division and battalions containing a summary of the CI investigation. An ESD message would be submitted only if the investigation indicated espionage, sabotage, or subversion and it had been agreed that brigade would submit the ESD message rather than the CI control element at division.
- Redirection given to CI team if their investigation raises new questions
- Briefing to the commander and/or the affected unit chief concerning investigation results and recommendations

COORDINATION

- Inputs:
- Any brigade element or unit
 - CI team

7 February 1978

44

System Development Corporation
TM-6009/002/00

Outputs: • CI team
 • Division G2 element
 • Brigade commander
 • Affected brigade element or unit

NOTES

- The brigade-attached CI team does the actual investigation. The S2 officer gives them the mission and looks at the results, redirecting if necessary.
- In cases of possible compromise involving the S2 section itself, a "disinterested" officer would be appointed to direct the investigation instead of the S2.
- If the CI team uncovers any problems during their periodic inspections, they inform the S2 who coordinates with the unit.
- This is a coordination task requiring the flexibility of verbal communications and does not qualify for TOS interaction. However, as indicated in the outputs, TOS ESD messages reporting the findings might be input by the brigade S2 element.

7 February 1978

45

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates human intelligence exploitation activities.

TASK: Facilitates attachment of counterintelligence and prisoner interrogation assets from division.

FREQUENCY ESTIMATE: Less than once per day

CRITICALITY: 4

DUTY POSITION: S2, Assistant S2

INPUTS

- Information from division G2 as to what intelligence elements are to be attached from division and their sizes
- Brigade field standing operating procedures

OUTPUTS

- Call to brigade headquarters company commander to tell him how many people are coming and requesting logistical assistance for them
- Briefing of CI and IPW teams on what they are to do during the mission

COORDINATION

Inputs: Division G2

Outputs:

- Brigade headquarters company commander
- CI team
- IPW team

NOTES

- CI and IPW team members attend the regular briefings to stay informed of the brigade situation.
- This is a coordination task requiring the flexibility of verbal communications and does not qualify for TOS interaction.

7 February 1978

46

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates human intelligence exploitation activities.

TASK: Coordinates with the brigade S3 on planned or proposed psychological warfare activities.

FREQUENCY ESTIMATE: Very rare

CRITICALITY: 4

DUTY POSITION: S2, Assistant S2

INPUTS

- S2 situation map
- TOS console graphics displays
- Intelligence annex
- BIRs
- TOS ESD and other file data
- Spot reports

OUTPUTS

Suggestions given to the S3, or civil-military operations officer (S5), about areas of psychological warfare that the enemy would be particularly susceptible to in their current situation. For example, the enemy might be lacking food, been on the line a long time without sleep, or lost a commander.

COORDINATION

Inputs: None. Use existing data.

Outputs: S3 or S5

NOTES

Although the current enemy situation is derived primarily from TOS data, the actual task of developing psychological warfare plans requires the flexibility of verbal communications and will not involve TOS interaction.

7 February 1978

47

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S2

FUNCTION: Coordinates human intelligence exploitation activities.

TASK: Coordinates with the brigade S1, S3, and S4 concerning the evacuation and disposition of prisoners of war and others held by the brigade.

FREQUENCY ESTIMATE: Could be several times per day

CRITICALITY: 4

DUTY POSITION: S2, Assistant S2

INPUTS

Notification of capture of prisoners from battalion S2, brigade S3, or brigade-attached IPW team. Notification would include grade, any captured documents, and unit and position, if known.

OUTPUTS

S2 informs other staff sections as to how soon he wants the prisoner(s) evacuated

COORDINATION

Inputs: ● Battalion S2
 ● Brigade S3
 ● Brigade-attached IPW team

Outputs: ● Brigade S1
 ● Brigade S3
 ● Brigade S4

NOTES

The S2's only involvement in the handling of prisoners is his recommendation for their evacuation. This is a simple face to face coordination task that would not benefit from nor require TOS interaction.

7 February 1978

48

System Development Corporation
TM-6009/002/00

PERSONNEL

TABLE 2.
Brigade S2 Manning

<u>Title</u>	<u>Doctrinal Manning for Sustained Manual Operation</u>			<u>Recommended Manning Under TOS</u>		
	<u>Grade</u>	<u>MOS</u>	<u>Number</u>	<u>Grade</u>	<u>MOS</u>	<u>Number</u>
S2	O4	35A	1	O4	35A	1
Assistant S2	O3	35A	1	O3	35A	1
Intelligence sergeant	E8/E7	96B	2	E8/E7	96B	2
Personnel carrier driver (RTO)	E4	11B	2	E4	11B	2
Light vehicle driver (RTO)	E3	11B	<u>2</u>	E3	11B	<u>2</u>
Total Officers/Enlisted Men			2/6	2/6		

This table depicts the manning a brigade might employ to sustain 24-hour operations in a tactically deployed manual element, and the manning proposed for the element to sustain 24-hour operations using TOS. The recommendations do not provide for relief or replacement personnel.

The doctrinal manning as taken from TOS FM 222 test document, "Manual Baseline Brigade Organization and Function" ACN 23487, showed just one intelligence sergeant and one light vehicle driver. Both positions have been increased to two as it is felt that the brigade S2 element could not sustain around-the-clock operations under either TOS or manual operations without at least one officer, one intelligence sergeant, and two radio-telephone operators (RTOs) per shift. In addition to this minimum essential manning, the investigated brigade also had an E4/E3 order of battle analyst for each shift. This analyst maintained the large scale acetate situation map and assisted in intelligence analysis. It is felt that the analyst position should not be required if the amount of independent analysis performed by the typical brigade S2 element is considerably less than that in the investigated brigade. Also, the RTOs might be able to assist in maintaining the acetate situation map if there is enough position stability to permit training. This is possible because the voice radio traffic should be considerably reduced under TOS.

The two officers will direct the element activities and perform the required coordination with other brigade staff elements. It is felt that the officers should be thoroughly trained in the TOS data base and functions as most of the

7 February 1978

49

System Development Corporation
TM-6009/002/00

information with which they work will be resident in TOS. Also, they will be required to act, in essence, as data base managers, controlling the TOS usage of their battalion S2s. This task requires some knowledge of internal system operations. It is also felt that the S2 and assistant S2 should be capable of actually operating the TOS console to "fill in" when the intelligence sergeant is absent and to perform on-console analysis when required.

It is recommended that the intelligence sergeant be the primary TOS console operator. In this capacity, he will receive and input TOS messages, create graphics displays, retrieve data base information, and directly monitor battalion S2 element TOS usage under the general supervision of the S2 or the assistant S2. The intelligence sergeant is recommended for this job because he is trained in intelligence and possesses sufficient experience to know what intelligence information is required for what tasks at what echelons and thus can work reasonably independently in interacting with the TOS data base.

The two driver personnel per shift will act primarily as the RTOs, operating the division and brigade intelligence radio nets. Under TOS, the radio traffic should be sufficiently reduced to permit one of them to post the situation map with intelligence information received via TOS or via radio. The only direct interaction these positions should have with TOS will be in preparing the equipment for transport and assisting in hooking it up at the new location.

RECOMMENDATIONS

None.

7 February 1978

50

System Development Corporation
TM-6009/002/00

BRIGADE OPERATIONS ELEMENT

GENERAL

The brigade operations element (S3), supervised by the brigade executive officer, is located in the brigade tactical operations center. The brigade S3 is normally located in the tactical operations center or accompanying the commander in the field as part of the command group.

The S3 element is responsible for monitoring the operational situation and developing detailed tactical operations planning. The element has overall responsibility for supervising the tactical operations center, keeping the commander informed of the tactical situation, supervising the preparation of operations and fragmentary orders, developing courses of action, supervising and coordinating tactical operations and combat support, and maintaining records and reports as may be required.

MISSION

The mission of the S3 is to administer, plan, conduct, and report the brigade operational requirements necessary to achieve stated missions, objectives, and maneuvers.

OVERVIEW OF TOS OPERATIONS

The S3 element will operate from the operations area of the brigade tactical operations center. TOS operations will be conducted using the analyst console specified for S3 operations. Although it is not specified, the console may also have to be shared to support nuclear, biological, and chemical (NBC), G1, and G4 operations conducted within the brigade. The S3 element will use the operations and plans TOS console to:

- maintain the tactical situation
- recommend actions to the commander
- prepare the operations order and overlay
- coordinate preplanned close air support and tactical airlift requests.

The TOS console will also be used to query, SRI, display, print, and update the FRENISIT files for operational information bearing on the brigade tactical situation.

The S3 plans officer will use the TOS console to develop and portray the tactical situation required by the brigade commander. Initially, he will have to review division files to determine what existing files are relevant and can

7 February 1978

51

System Development Corporation
TM-6C09,002/00

be used to construct the brigade situation display. This action will tend to conserve display file space and prevent redundant files. Display information required by the brigade commander that is not resident in division files will have to be obtained by selectively querying the TOS data base and constructed into unique brigade display files. The two sets of display files may then be graphically combined and composed into a situation display for the commander.

Once developed, the situation display must be constantly monitored by the S3 element to detect shifting tactical changes to which the staff must respond. The plans officer may use the graphics capabilities of TOS to generate courses of action for these tactical situations. The plans may be stored in a staff working file and briefed to the S3 on console. If approved, the plans officer can use the file to construct a new operations overlay and adjust the files appropriately to implement the course of action. TOS may also be used to transmit the new overlay to all battalions simultaneously. The selection of this and the previous task for TOS assistance is based on the fact that the division is already using TOS to perform the task and many of its files have utility for brigades and battalions. Course of action generation and operations overlay development are ideal for TOS graphics and are continuously performed and rated a task criticality of one.

The brigade S3 element will be able to use the TOS data base to extract the essential elements necessary to construct the brigade portion of the division operations order. The plans officer will be expected to augment the basic division order and overlay by analyzing the enemy indicators and avenues of approach to develop the task organization, tactical dispositions, and course of action which can best satisfy brigade objectives. When planning is approved by the S3 and commander, the plans officer can access TOS graphics and create a brigade overlay which should describe the basic boundaries, objectives, coordination points, and phase lines developed to achieve the objectives. The brigade overlay may then be automatically distributed to battalions for review and amplification as required. This task is supported because its a continuation of a division TOS assisted task and carries a criticality of one.

The S3 air will be able to use TOS and the division established files to process and roll up brigade and battalion requests for preplanned close air support and tactical airlift requests. He will be notified by relay messages when battalions have loaded their requirements in the division staff working file. The S3 air will then access the file and consolidate, modify, and add requests to satisfy the brigade tactical requirements. When the requests are completed, he will send a relay message to the division G3 air indicating that the brigade requests are ready for review and processing. The file of preplanned requests will then be processed through division, corps, and direct air support center (DASC). The files will be updated by the G3 to reflect approved flights and he will transmit a relay message to lower echelons indicating that the approved flights are available for review. The use of the division staff working file concept will minimize file space, permit roll up

7 February 1978

52

System Development Corporation
TM-6009/002/00

in one file, and speed up processing time. By delaying preplanned processing as long as possible, brigade and battalions should be in a better position to analyze the tactical situation and select more suitable targets.

The S3 element at the tactical operations center will also be expected to use the TOS console to query the data base for information pertaining to the tasks cited and others defined by the S3, SRI the data base for significant pieces of information required, update or delete information from a file for which they are responsible, develop and maintain display files required by the S3, and build staff working files necessary to conduct tactical operations. Operations staff personnel will also be expected to move the system when required, reinstall it, complete the communications hookup, power up the console, insert paper in the printer, perform system checkouts to insure a good working system, and perform malfunction reporting as required.

FUNCTIONS AND TASKS

Functions and tasks performed by the S3 element are addressed in this section. A matrix of the tasks and duty position relationships, indicating which tasks will remain manual and which will be TOS assisted, is included as Table 3.

Following the table are task description forms, one for each task, stating whether the task is manual or TOS assisted and providing information about frequency estimate, criticality, duty position affected, inputs to the task, coordination requirements, and task outputs. For tasks which are TOS assisted, the man/machine interface requirements are listed and procedures for performing the task are discussed.

7 February 1978

53
(Page 54)

TABLE
Brigade Operations Element Po

FUNCTIONS AND TASKS	S3	Assistant S3 Air	Operations Sergeant	Oper Assi
Keeps the commander, staff, higher and lower, and adjacent unit informed of the tactical situation and recommends to the commander actions to be taken to accomplish the brigade mission.	X	(X)	(X)	(
Supervises and coordinates the functioning of the tactical operations center.	X	X		
Supervises the preparation of the operations plan and the air support portion of the fire support plan.	X	(X)	(X)	(
Supervises and coordinates tactical operations and their support.				
Supervises and coordinates fire support with scheme of maneuver.	X	X	X	
Coordinates combat support.	X	X	X	
Assists the S4 in the coordination of combat service support.	X	X	X	
Supervises and coordinates requests for air support.				
Coordinates preplanned close air support and tactical airlift requests.		(X)	(X)	
Approves and disapproves immediate air requests.	X	X		

TABLE 3.
us Element Positions, Functions, and Tasks

Operations Sergeant	Operations Assistant	Personnel Carrier Driver	Senior Radio Operator	Voice Radio Operator	Light Vehicle Driver	Assistant S3 Plans	Assistant Operations Sergeant	Clerk Typist
(X)	(X)	X	X	X	X	(X)	(X)	(X)
						X		
(X)	(X)					(X)	(X)	(X)
X		X		X	X	X	X	
X		X		X	X	X	X	
X		X		X	X	X	X	
(X)						(X)	(X)	
						X		

7 February 1978

55
(Page 56)

TABLE 3
Brigade Operations Element Pos:

FUNCTIONS AND TASKS	S3	Assistant S3 Air	Operations Sergeant	Opera Assis
Prepares for future operations.	X	X	X	
Prepares the operations plan or order.			X	
Maintains records and reports for the TOC.		X	X	
Performs the hookup, energizing, intialization, and checkout of the TOS corsole.			(X)	

X - Manual Task

(X) - TOS Assisted Task

TABLE 3. (Continued)

Positions Element Positions, Functions, and Tasks

Operations Sergeant	Operations Assistant	Personnel Carrier Driver	Senior Radio Operator	Voice Radio Operator	Light Vehicle Driver	Assistant S3 Plans	Assistant Operations Sergeant	Clerk Typist
X						X	X	
X	X		X				X	X
X	X	X	X	X	X	X	X	X
(X)	X						X	X

7 February 1978

57

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S3

FUNCTION: Keeps the commander, staff, higher and lower, and adjacent units informed of the tactical situation and recommends to the commander actions to be taken to accomplish the brigade mission.

TASK: Keeps the commander, staff, higher and lower, and adjacent units informed of the tactical situation and recommends to the commander actions to be taken to accomplish the brigade mission.

FREQUENCY ESTIMATE: Ongoing

CRITICALITY: 1

DUTY POSITION: S3, Shift Officer, Operations Sergeant, Operations Specialist, Personnel Carrier Driver, Senior Radio Operator, Voice Radio Operator

INPUTS

- Battalion battlefield information reports
- File update reports

COORDINATION

- Brigade commander
- Principal and special staff
- Battalion S3(s)
- Division G3

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Graphics
- Data transfer
- Attention devices

PROCEDURES

- TOS assisted - The shift officer should review and approve all battalion messages being forwarded to division to update files and/or records. The BIR is the only known exception to this requirement; the battalion BIR(s) will be inserted and dropped off at brigades and division on the way to corps. The extent of brigade review of other messages and/or file updating would appear to be dependent upon system throughput and confidence in

battalion personnel. The shift officer must identify and insert into the TOS console those message formats and file updates he wishes to review and approve before going to division. He should also be responsible for reconfiguring the review requirements consistent with the tactical situation. Conflicts or problems involving battalion reporting should be brought to the attention of the S3. It must be assumed that reports such as BIR will also be very carefully monitored by the S3 in preparation for submitting the brigade BIR. It is anticipated that the brigade review responsibility would eventually be determined and defined in the standing operating procedures.

- Manual - The S3 will be required to specify tactical situation display categories for the tactical operations center. These may include but are not limited to: friendly front line traces, brigade/battalion/company boundaries, tactical dispositions, fire lines, minefields and barriers, unit locations, and nuclear and chemical strikes.
- TOS assisted - The shift officer, operations sergeant, and operations specialist will translate the S3 requirements into appropriate display files by querying the data base and assembling the required tactical data. They must first review all division display files to determine which are satisfactory and can be used to support brigade requirements. This eliminates redundant files and saves file space. Additional display data can then be assembled thorough queries and SRIs and developed into unique brigade display files. The two sets of files must be consolidated through graphics to present the required display. The shift officer should also specify the appropriate attention devices to alert crew personnel when display changes of special interest take place. Major files contributing to this task are the tactical disposition, battlefield information report, task organization, unit operations report, terrain and division display files.
- TOS assisted - The plans officer will be required to assimilate the tactical data developed by the shift officer and develop courses of action required by the changing tactical situation. The courses of action in all probability would be developed manually and stored in a plans staff working file. These plans would be displayed and/or briefed to the S3 on an as available basis or immediately if warranted by the tactical situation.
- Manual - The S3 will be expected to analyze each potential course of action, share it with the staff if necessary to obtain supporting and opposing positions and present the recommendations to the commander for consideration. It may be necessary due to the limited console display size to conduct the commander's briefing off console. This would also permit a larger staff audience at the presentation. The S3 plans staff would be expected to prepare the necessary maps and charts to support such an off console briefing.
- TOS assisted - At the conclusion of the briefing, the plans officer would have generated those changes to the course of action directed by the commander and update the plans staff working file accordingly.
- TOS assisted - The shift officer must prepare and transmit fragmentary orders required by the courses of action approved by the commander. The

fragmentary orders may either be an overlay or free text message to the battalions. In either case, it will be generated using the planning capability of the TD file.

- TOS assisted - The shift officer would be expected to draft the brigade BIR for the S3 approval. When approved, the operations sergeant would generate the BIR using the appropriate format and distribution for transmission to corps.

OUTPUTS

The outputs of this task are the generation of the status of the brigade and proposed courses of action to evolving tactical situations facing the brigade or its battalions. This activity will be conducted in accordance with guidance forwarded by the commander.

NOTES

- The BIR appears to be emerging as the principal report for describing the tactical situation at the brigade and battalion level. If this is true, then the frequency of the report must be such that it can in fact represent the situation of the brigade at the tactical command post. The BIR must represent both the normal reporting cycle specified by standing operating procedures and emergency situations as well. The free text capability of the BIR must be used effectively to make the report comprehensive and useable to operations personnel.
- The BIR is not subject to the SRI capability and will therefore have to be carefully controlled by distribution.
- It is anticipated that the current and previous BIRs will be resident in the data base. Those being purged from the file should be printed and filed for the record. Data from the BIR is also expected to be used to update data items in other files. For example, the reporting of a new command post location would automatically be extracted from the BIR and used to update that item in the tactical disposition file. This type of file updating could lead to redundant reporting and must be watched closely by the shift officer.
- The total number of display files authorized for the division may be limited. It will be advantageous if brigades and battalions can use as many of division's display files as possible. Creating new display files will tend to reduce the overall number available to all echelons and reduce graphics capabilities within the division.

7 February 1978

60

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinates the functioning of the tactical operations center (TOC).

TASK: Supervises and coordinates the functioning of the tactical operations center (TOC).

FREQUENCY ESTIMATE: Ongoing

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

- Standing operating procedures
- Operating instructions

OUTPUTS

- Basic installations, operations, and procedures involving TOC operations, control, and displacement
- TOS impact - This will remain basically a manual task but TOS could impact the staff coordination if it should involve relocation or displacement of people to consoles and other working areas within the tactical operations center. Should this occur, close coordination with SYSCON must be accomplished.

COORDINATION

- Principal and special staff
- G3 division
- Executive officer

NOTES

- This task is basically general and falls within the purview of the S3.
- Transition of the command post to a new location could fall under this task. Basically those procedures are:
 1. S3 selects new command post location based upon commander guidance. It is assumed that the deployment method is also recommended.
 2. Brigade commander determines when the old command post closes and the new is opened.

7 February 1978

61

System Development Corporation
TM-6009/002/00

3. Quartering party is headed by the S1.
 4. Permanent files, records, and unit journal remain with the rear.
 5. Jump command post is used to ensure continuous operations during displacement. Movement of the Jump command post is under the control of the S3 member.
 6. Location of the S2/S3 operations center governs the location of the other elements.
 7. Senior and signal officers determine when the new location is ready and notify the brigade commander.
 8. Executive officer designates the time of movement for the rear element of the command post.
 9. Brigade S3 reports the new location and time of opening and closing of command post to division G3.
- Subordinate units report change of command post locations to the brigade S3 as soon as possible.
 - Twice daily meeting is held in the command post to update the commander. All principal and special staff attend.

7 February 1978

62

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Brigade S3

FUNCTION: Supervises the preparation of the operations plan and the air support portion of the fire support plan.

TASK: Supervises the preparation of the operations plan and the air support portion of the fire support plan.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 1

DUTY POSITION: S3, Assistant S3 Plans, Operations Sergeant, Operations Assistant

INPUTS

- Plan from higher headquarters - The task organization, operations overlay and basic order are resident in the machine and can be accessed by the plans officer
- Commander's guidance

COORDINATION

- G3 plans at main
- Principal staff
- Special staff

MAN/MACHINE INTERFACE REQUIREMENTS

- File access
- Data transfer
- Graphics

PROCEDURES

- Manual - Upon receipt of the division order, the S3 and plans officer will analyze the mission statement to determine the specific and implied tasks assigned to the brigade.
- TOS assisted - The plans officer will develop a task organization to support the objectives identified and to determine asset utilization. When developed the data should be stored in the plans staff working file.
- TOS assisted - The plans officer supported by the S2 should determine enemy indicators and course of action pertaining to the mission developed.

This can be accomplished by accessing and reviewing the EOB, ESD, terrain, and other staff working files available to the S2.

- Manual - The S3 and plans officer should then develop the best course of action based on the tasks assigned to the brigade, the enemy situation, and the commander's guidance.
- TOS assisted - The plans officer should generate a graphics operations overlay using the tactical disposition file planning capability. The overlay can include the basic boundaries, objectives, coordination points, and phase lines developed to achieve the objective. The task organization may also be annotated if possible.
- TOS assisted - This overlay should be stored in the plans staff working file and transmitted to higher and lower using the appropriate distribution indicated by standing operating procedures. Appropriate files such as the task organization would have to be accessed and updated according to the plan when its implemented.

OUTPUTS

The output of this task is the development of a basic operations order overlay designed to accomplish the brigade mission. Pertinent objectives and control measures will be included as an integral part of the overlay. This overlay will constitute the basic operations plan and be transmitted to higher and lower according to standing operating procedures when the plan is implemented.

NOTES

- Basic battalion plans will be generated in consonance with the operations order overlay. Battalions can then task organize to the level they desire and update the task organization file accordingly.
- The basic air support portion to the fire support plan will be done during operations order development but will remain strictly a manual task.
- Because of the two shift operation in the tactical operations center, the bulk of planning will be done by the assistant S3 air and the assistant S3 plans who will function as the shift officers. The outputs of their planning will be coordinated directly with the S3.

7 February 1978

64

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinates tactical operations and their support.

TASK: Supervises and coordinates fire support with scheme of maneuver.

FREQUENCY ESTIMATE: 2 or 3 times a day (estimate includes the next three tasks)

CRITICALITY: 1

DUTY POSITION: S3, Fire Support Officer (FSO), Shift Officer, Operations Sergeant, RTO

INPUTS

Request for support or an anticipation of need for support. This is considered to be a critical or immediate request for support.

OUTPUTS

- Fire support provided to battalion as requested. Notification provided over FM net.
- Organic assets are not available, the S3 will go to the division G3 over division operations FM net for support.
- TOS impact - TOS will not impact this task and it will continue to be accomplished manually.

COORDINATION

- Brigade artillery
- Division G3

NOTES

- Task is considered to be a readjustment or reaction to a mission currently in progress.
- Request is forwarded as a flash situation report by battalion over the brigade FM net.

7 February 1978

65

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinates tactical operations and their support.

TASK: Coordinates combat support.

FREQUENCY ESTIMATE: 2 or 3 times a day (estimate includes all three tasks)

CRITICALITY: 1

DUTY POSITION: S3, Shift Officer, Operations Sergeant, RTO

INPUTS

Battalion requests for:

- Mine laying
- Barrier construction
- River crossing operations
- Air support
- Signal support
- ADA support

These requests are to be considered as critical or immediate requests for support.

OUTPUTS

- Combat support will be provided as requested. Notification is via brigade FM net.
- Requests that cannot be handled at the brigade level are coordinated with the G3 at division by the S3.
- TOS impact - There is no TOS impact intended for this task. Where immediate support changes result in alterations to the files they should be upgraded by the staff section generating the support. For example, if the engineer changes the barrier or obstacle plan to help the battalions maneuver, then he should access the terrain file and make the appropriate changes to the barriers and obstacles in that file.

COORDINATION

- Principal and special staff as required
- Division G3
- Engineers
- Army aviation personnel
- Air Defense Artillery (ADA) personnel
- Signal personnel

7 February 1978

66

System Development Corporation
TM-6009/002/00

NOTES

- Task is considered to be a readjustment or reaction to a mission currently in progress.
- Request is forwarded as a flash situation report by battalion over the brigade FM net.
- Requests for immediate air strikes could be handled by a careful review and substitution of a preplanned air strike.

7 February 1978

67

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinate tactical operations and their support.

TASK: Assists the S4 in the coordination of combat service support.

FREQUENCY ESTIMATE: 2 or 3 times a day (estimate includes all function 4 tasks)

CRITICALITY: 1

DUTY POSITION: S3, S4, Shift Officer, Operations Sergeant, Operations Assistant, RTO

INPUTS

Battalion requests for combat service support for critical need or anticipation of a need

OUTPUTS

- Battalion requests will be satisfied from the brigade organic assets. Notification will be by brigade FM net.
- Requests that cannot be satisfied by brigade will be forwarded to division G4 by the S4 on the division FM net.
- TOS impact - No TOS support is intended for this task and it will remain manual.

COORDINATION

- Principal staff and special staff as required
- Division G4

NOTES

- Task is considered to be a readjustment or reaction to a mission currently in progress.
- Task is considered to be critical.
- Request is forwarded by battalion on the brigade FM net as a Flash Situation Report.

7 February 1978

68

System Development Corporation
TM-6009/002-00

TOS ASSISTED TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinates requests for air support.

TASK: Coordinates preplanned close air support and tactical airlift requests.

FREQUENCY ESTIMATE: 1 per shift

CRITICALITY: 2 or 3

DUTY POSITION: S3 Air, Operations Sergeant

INPUTS

- Preplanned close air support staff working file which contains the rolled up battalion requests
- Brigade airlift support staff working file

COORDINATION

- S3
- Air liaison officer
- Aviation officer
- G3 air
- Fire support coordination center

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Date transfer

PROCEDURES

- TOS assisted - The S3 air will receive a relay message from each battalion indicating that their preplanned close air support mission requirements have been loaded in the division preplanned close air support file. Each battalion will also include the S3 air on distribution for each airlift support request they load in the brigade airlift support staff working file.
- TOS assisted - The S3 air will access the staff working file and will consolidate, reprioritize, and add close air support sorties necessary to fulfill the brigade mission. When he has completed the file requirements, the G3 air will be notified by relay message that the brigade's portion of the preplanned air requests file is ready for review. The S3 air would also

coordinate all preplanned requests forwarded to division with the brigade air liaison officer. The S3 air will review all battalion airlift requests utilizing the printed copy. The requests will be coordinated with aviation section commanders and where organic airlift is available, it will be provided. The aviation section commander who has the assigned mission will establish and maintain liaison with the supported unit. When nonorganic airlift is available, the S3 air will recall the airlift request to the console, annotate the priority of the mission and transmit to the G3 air for support.

- TOS assisted - The S3 air will be notified by the G3 air via relay message that the preplanned close air support file has been updated by DASC and corps and is available for review. The S3 air should recall the file and review the action taken to provide his preplanned requests. Battalions will also review the relay messages and should be reviewing the actions taken to support their requests concurrently with the S3 air. The G3 air should also notify the S3 air on the status of the airlift requests by relay message. If disapproved, the file should be recalled and so annotated. The battalions should also notify the S3 air when approved flights were conducted and completed successfully in order to close out the request in the file. The file item should be updated, printed, and deleted if file space is needed.

OUTPUTS

The outputs of this task are the processing of preplanned airlift and close air support missions in support of the maneuvering brigades and battalions.

NOTES

- Airspace coordination requirements will be transmitted by the S3 air to the Fire Support Coordination Center for processing.
- Army aviation support will normally be allocated to those units performing the major combat effort.

7 February 1978

70

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Supervises and coordinate requests for air support.

TASK: Approves and disapproves immediate air requests.

FREQUENCY ESTIMATE: Unknown

CRITICALITY: 1 or 2

DUTY POSITION: S3, Shift Officer, Air Liaison Officer

INPUTS

Battalion requests for immediate air support are passed to the DASC on the immediate air request net.

OUTPUTS

Approval or disapproval of battalion and brigade immediate air requests.

COORDINATION

S3

NOTES

- Brigade and battalion air requests are passed on the immediate air request net.
- All command levels monitor the net and may approve or disapprove the request for air support. No comment on the request constitutes approval.
- Brigade disapproval of a battalion request is the prerogative of the S3 and is coordinated through the air liaison officer.
- The air liaison officer could recall the staff working file of approved preplanned close air strikes to determine if any of the scheduled flights could be substituted or augmented to satisfy the immediate request.

7 February 1978

71

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Prepares for future operations.

TASK: Prepares for future operations.

FREQUENCY ESTIMATE: Ongoing

CRITICALITY: 1

DUTY POSITION: S3, Plans Officer, Operations Sergeant

INPUTS

Tactical situations

OUTPUTS

- Guidance on tactical situations concerning the use of maneuvering force
- Providing combat support and combat support services

COORDINATION

- Brigade commander
- Staff/special staff

NOTES

- It has been indicated that brigade and battalion do minimal planning for future operations and this task falls in the purview of division and corps.
- Brigade and battalion do reaction planning for current operational contingencies. They are more interested in how to attack the objective while maintaining the maximum flexibility possible.

7 February 1978

72

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Prepares the operations plan or order.

TASK: Prepares the operations plan or order.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 1

DUTY POSITION: Operations Sergeant, Senior Radio Operator, Clerk Typist

INPUTS

- Plan from higher headquarters
- Commander's guidance

OUTPUTS

- The completed brigade operations order is passed to division using TOS distribution.
- The order is passed to battalions using TOS and they are tasked to complete their portion of the order.

COORDINATION

The entire principal and special staff may participate.

NOTES

- The only TOS supported aspect of this task is the operations overlay development which was discussed in an earlier task.
- Under this task, the brigade will perform all the administrative tasks required to supervise, assemble, and distribute the final order and its annexes which are assembled manually.

7 February 1978

73

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Brigade S3

FUNCTION: Maintains records and reports for the TOC.

TASK: Maintains records and reports for the TOC.

FREQUENCY ESTIMATE: As required

CRITICALITY: 1 or 2

DUTY POSITION: Assistant S3 Plans, Shift Officer, Operations Sergeant

INPUTS

- Status reports
- Command post locations
- Troop dispositions
- BIR

OUTPUTS

- Maintenance of displays and files
- Reports to division
- Log tapes and printouts

COORDINATION

- S3
- Staff

NOTES

- The operations sergeant is responsible for reviewing all incoming and outgoing messages to insure that all appropriate data is inserted into the log.
- Shift officer and operations sergeant post all appropriate data in the computer.
- Operations journal is a continuous running log closed out every 24 hours.
- RTO transmits all reports and messages on the FM net.

7 February 1978

74

System Development Corporation
TM-6009/002/00

PERSONNEL

TABLE 4.
Brigade S3 Manning

<u>Title</u>	<u>Doctrinal Manning for Sustained Manual Operation</u>			<u>Recommended Manning Under TOS</u>		
	<u>Grade</u>	<u>MOS</u>	<u>Number</u>	<u>Grade</u>	<u>MOS</u>	<u>Number</u>
S3	04	54A	1	04	54A	1
Assistant S3 air	03	54A	1	03	54A	1
Operations sergeant	E9	11Z50	1	E9	11Z50	1
Operations assistant	E4	11B10	1	E4	11B10	1
Personnel carrier driver	E4	11B10	1	E4	11B10	1
Senior radio operator	E4	05E20	1	E4	05E20	1
Voice radio operator	E3	05E20	2	E3	05E20	2
Light vehicle driver	E3	11B10	1	E3	11B10	1
Assistant S3 plans	03	54A	1	03	54A	1
Assistant operations sergeant	E8	11B50	1	E8	11B50	1
Clerk typist	E4	71B30	<u>1</u>	E4	71B30	<u>1</u>
Total Officers/Enlisted Men			3/9	3/9		

This table depicts the manning a division might employ doctrinally to sustain a 24-hour capability in a tactically deployed manual element and an estimated affect TOS might have on that manning.

The S3 air and the plans officer will fill the basic responsibility of shift officer within the tactical operations center. They will supervise the crew, specify display criteria, analyze the situation display, prepare courses of action, prepare the operation order, direct file updating, process battalion

requests and operate the TOS console if necessary. The E9 and E8 should fulfill the basic crew NCOIC responsibilities for the two twelve-hour shifts. They will directly support the shift officer in performing his responsibilities and provide guidance and direction to the enlisted personnel. The NCOIC(s) will ensure that the FM nets are adequately manned, operated, and that required recording and journal maintenance is performed by the crew. The radio operators and the two drivers will be necessary to maintain the division and brigade FM nets for the two twelve-hour shifts. The RTCs will be supported by the senior radio operator. He will also keep the equipment functioning properly and support the NCOIC as the situation warrants. The operations assistant and the clerk typist should be trained to be the basic console operators. In addition to performing console tasks, they should be expected to perform other administrative responsibilities associated with operations order and fragmentary order processing. Initially, there appears to be no significant factors which would either increase or decrease the S3 element manning to support TOS operations.

RECOMMENDATIONS

1. Consolidation of display requirements within the division.

The use of graphics displays files, if left unchecked, could reach an inordinate number and create many redundant files. There appears to be no reason why a series of common display files should not be created and used at every echelon. This could standardize the use of display files and save needed file space. It is suggested that a series of common operations display files be developed for use at all echelons. These may be added to satisfy special requirements of the commander. Other elements should also investigate common displays in an attempt to reduce file space. This approach may be required if the total division display file space is a fixed number. Ultimately the numbers and allocation of file space for display purposes should be controlled by standing operating procedures.

BATTALION INTELLIGENCE ELEMENT

GENERAL

The battalion intelligence (S2) element, supervised by the battalion S2 officer, is located in the battalion command post tactical operations center. Typically, there is no additional intelligence support attached to the maneuver battalion. The general description given here of the maneuver battalion S2 should also be true of the armored cavalry squadron S2. An exception is that the cavalry squadron is apt to input more combat information than a maneuver battalion because of its functions as a cover force. Also, if communications permit, the cavalry squadron will report directly to division rather than to a maneuver brigade.

MISSION

The mission of the maneuver battalion S2 element is to keep the battalion commander, battalion staff, and subordinate units informed of the current enemy situation, terrain, and weather information. They also provide combat information to higher echelons, coordinate the intelligence collection effort at battalion level, and provide a source of intelligence information to the battalion commander and staff for operations planning.

OVERVIEW OF TOS OPERATIONS

Under the current TOS hardware configuration, the battalion will have one TOS console used primarily by the S3 and S2 elements. The S2 element will use the console to receive combat information and intelligence from division and brigade and to input combat information to brigade and division. The console will be used to receive ICT messages and to input ICR messages. The TOS console will also be used to retrieve TOS data base information needed to answer questions and to clarify the enemy situation. The TOS console might also be used to input battalion daily ground surveillance and reconnaissance plans and preplanned air reconnaissance flight requests in TOS staff working files to be rolled up through brigade to division.

Battalion S2 personnel will receive TOS EDS, EOB, and TER file input messages that are addressed to them or as a result of having active SRIs that route these messages to the battalion console. Hardcopy of these TOS output will be used to update the large scale acetate situation map and the S2 journal, in drawing conclusions concerning the enemy's actions, to inform the battalion staff of important events, and to pass appropriate information to subordinate units over the battalion command radio net which is operated by the S3 element.

7 February 1978

77

System Development Corporation
TM-6009/002/00

Battalion S2 personnel will compose and transmit TOS ESD input messages. ESD messages will be used to report important and/or requested combat information received from subordinate units or obtained from debriefing ground reconnaissance patrols.

TOS ICT messages requesting information that can be gathered by front line troops will be received on the battalion TOS console. Battalion S2 personnel will assign the request to reconnaissance patrols and/or pass the request on to subordinate units. Battalion S2 personnel will also input TOS ICR messages requesting collection of intelligence information required by the battalion staff that can not be collected by battalion assets and is not presently in the TOS data base.

Battalion S2 personnel will query the TOS ESD, EOB, and TER files to obtain intelligence information not currently available at battalion but required by the battalion staff. If an intelligence summary file is kept at division, battalion S2 personnel will query the file to obtain the latest weather information and the most current division estimates concerning the enemy situation and the effects of terrain and weather.

Division-created TOS staff working files might be used by the battalion S2 element to enter their daily ground surveillance and reconnaissance plan and daily requests for preplanned air reconnaissance missions. They would enter the location and coverage of their ground surveillance radars (GSRs) and particulars concerning proposed ground reconnaissance patrols in pre-defined items of a G2 R&S-developed staff working file. This information would then be transmitted to brigade, and eventually to division, for review. Battalion would be notified of any recommended changes via voice communications. Similarly, battalion S2 personnel would enter any air reconnaissance mission requests preplanned for the following day in another pre-defined staff working file which would go through a similar roll up process.

The performance of many battalion S2 tasks will not involve TOS usage. The existence of only one TOS console at battalion will require that the passing of information between battalion staff elements be accomplished via voice communications. Some battalion S2 tasks require verbal coordination and would not use TOS even if additional consoles were available. These tasks include the debriefing of patrols, coordinating support for patrols and ASA signal intelligence teams, requesting CI investigative support, and advising the battalion staff on operational security matters.

Echelons below battalion will not have TOS equipment so communications with subordinate units will not involve TOS. It is believed that limited battalion console availability will preclude the use of TOS graphics to depict the enemy situation at battalion level. It is felt that all necessary graphic situation displays will be maintained manually. For this reason, TOS should not directly support the S2 portion of the battalion commander's briefing.

7 February 1978

78

System Development Corporation
TM-6009/002/00

Preparation of the battalion OPORD intelligence annex is apparently merely a matter of editing the brigade annex and will remain manual. Other battalion S2 tasks are administrative and thus do not qualify for TOS interaction. These tasks include managing the distribution of maps, classified document accounting, and administering the security clearance program.

FUNCTIONS AND TASKS

Functions and tasks performed by the S2 element are addressed in this section. A matrix of the tasks and duty position relationships, indicating which tasks will remain manual and which will be TOS assisted, is included as Table 5.

Following the table are task description forms, one for each task, stating whether the task is manual or TOS assisted and providing information about frequency estimate, criticality, duty position affected, inputs to the task, coordination requirements, and task outputs. For tasks which are TOS assisted, the man/machine interface requirements are listed and procedures for performing the task are discussed.

7 February 1978

79
(page 80 blank)

TABLE 5.
Battalion Intelligence Element Positions, Functions and Tasks

FUNCTIONS AND TASKS	S2	Assistant S2
Plans and coordinates the combat intelligence collection effort for the battalion.		
Allocates ground surveillance radars to provide the best possible coverage of the battalion's area of responsibility.	(X)	(X)
Develops the ground reconnaissance plan.	(X)	(X)
Plans and submits requests for preplanned and immediate aerial reconnaissance.	(X)	(X)
Receives and analyzes tasking requests from higher headquarters and coordinates battalion intelligence data collection requirements.	(X)	(X)
Debriefs reconnaissance and combat patrols.	X	X
Performs coordination necessary to provide fire support and special transportation for reconnaissance patrols.	X	X
Coordinates with the battalion staff to provide support to signal intelligence elements operating within the battalion's area of responsibility.	X	X
Receives, publishes, and disseminates intelligence and intelligence-related information.		
Receives, processes, and disseminates intelligence and combat information.	(X)	(X)

TABLE 5.

ullion Intelligence Element Positions, Functions, and Tasks

	S2	Assistant S2	Intelligence Sergeant	Senior Intelligence Analyst	Clerk Typist (RTO)	Personnel Carrier Driver (RTO)
Collection effort for the						
the best possible ity.	(X)	(X)	(X)	(X)	X	X
	(X)	(X)	(X)	(X)	X	X
Immediate aerial	(X)	(X)	(X)	(X)	X	X
ner headquarters Collection	(X)	(X)	(X)	(X)	X	X
	X	X				
support and special	X	X				
support to signal allion's area of	X	X				
ze and intelligence-						
ence and combat	(X)	(X)	(X)	(X)	X	X

7 February 1978

8
(page 82)

TAB1
Battalion Intelligence Element

FUNCTIONS AND TASKS

Prepares the intelligence annex to the battalion OPORD.

Prepares and presents the intelligence portion of battalion staff briefings.

Supervises the distribution of maps provided by higher headquarters.

Coordinates counterintelligence activities and services.

Provides advice to the battalion commander and staff on operational security of the battalion command post.

Supervises the control and accounting of classified documents and materials.

Requests counterintelligence investigative support in instances of suspected espionage, subversion, sabotage, or compromise of classified material, and supports the investigation.

Administers the security clearance program.

Checks abandoned command post locations to insure that no information or materiel of possible use to the enemy is left behind.

Assists in battalion prisoner of war interrogation activities.

X - Manual Task

(X) - TOS Assisted Task

TABLE 5. (Continued)
Battalion Intelligence Element Positions, Functions, and Tasks

	S2	Assistant S2	Intelligence Sergeant	Senior Intelligence Analyst	Clerk Typist (RTO)	Personnel Carrier Driver (RTO)
on OPORD.	X				X	
of battalion	X	X				
y higher headquarters.	X		X			
services.						
staff on operational	X	X	X	X		
ified documents and	X		X		X	X
port in instances of compromise of classified	X	X	X	X	X	X
			X			
ure that no information ft behind.			X	X		
on activities.	X	X	X	X		

7 February 1978

83

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Allocates ground surveillance radars to provide the best possible coverage of the battalion's area of responsibility.

FREQUENCY ESTIMATE: Once a day, if changing locations

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

- Stimulus is a new mission or a change in company locations
- TOS EOB, TER, and intelligence summary staff working file contents
- Mission EEI and OIR as taken from the brigade OPORD intelligence annex
- Terrain maps
- Situation map
- Personal knowledge of the characteristics, limitations, and operating capabilities of the ground surveillance radar (GSR)

COORDINATION

Inputs: GSR section leader

Outputs: • Brigade S2
• GSR section leader

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- TOS assisted - Battalion S2 personnel might query the EOB file to obtain the lat division estimates of the location of enemy units in the battalion area of operation. They might query the TER file to obtain data on key terrain, cover and concealment, and likely avenues of approach

within the battalion's area of operation. They might query the intelligence summary staff working file to obtain the latest weather forecast if it is kept in such a file. All this TOS information could be used in selecting the best location for placing GSRs.

- Manual - The battalion S2 and the GSR section leader will use the hard-copied TOS data, the mission EEI and OIR, the large scale acetate situation map, and terrain maps as aids in selecting placement sites for GSRs. After the sites are selected, they might draw the GSR coverage areas on an acetate map overlay to obtain the right and left fan limits and to illustrate the coverage for planning purposes.
- TOS assisted - If the R&S element at division creates a staff working file for "rolling up" reconnaissance and surveillance plans as suggested in the R&S element description, then battalion S2 personnel would call up the file format and enter their GSR surveillance plan data in the appropriate items. This information would most likely include the GSR placement locations and the right and left fan limit locations for each GSR. The entry of ground reconnaissance patrol data in the same record is described in the next task description. If a staff working file is not used, then the ground reconnaissance and surveillance plan would be sent to brigade via courier or transmitted over the intelligence radio net.
- TOS assisted - After brigade and division review the battalion's surveillance plan, the brigade S2 might call the battalion S2 to suggest changes. If agreed upon, battalion S2 would coordinate the changes and update the the staff working file.

OUTPUTS

The outputs of this task are TOS queries and query responses, new and updated entries to a TOS staff working file, directions for GSR placement, and verbal communications.

NOTES

- Each battalion has four GSRs and each GSR with its three man crew is assigned to cover a company area. The companies provide all required support.
- The GSR section leader supervises the actual setup and operation of the GSRs.
- The value of using TOS to roll up ground reconnaissance and surveillance plans would be in reducing the time required to transmit these plans between echelons, thus increasing the chances of modifying plans before they can be implemented.
- It is not recommended that battalions use TOS to develop their graphic illustration of proposed GSR coverage because this would consume too much console time when console usage must be shared with other battalion elements.

7 February 1978

85

System Development Corporation
TM-6009/002/00

Also, if all battalions make such a use of TOS graphics, it would amount to a great deal of processing time with little operational benefit.

7 February 1978

86

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Develops the ground reconnaissance plan.

FREQUENCY ESTIMATE: Once per day

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

- TOS ESD, EOB, TER and intelligence summary staff working file contents
- Division and higher echelon patrol tasking requests received as TOS ICT messages
- Mission EEI and OIR as taken from the brigade OPORD intelligence annex
- S2 and S3 situation maps
- Brigade-requested patrol tasking received from the brigade S2 via voice communications or as patrol orders received via courier
- Battalion patrol reconnaissance needs as stated by the battalion commander and battalion S3

COORDINATION

- Inputs:
- Brigade S2
 - Battalion commander
 - Battalion S3
- Outputs:
- Patrol members
 - Company commanders
 - Brigade S2

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- Manual - Battalion S2 personnel will study the EEI and OIR in the brigade OPORD intelligence annex to determine which information requirements can be collected by foot patrols. They might also receive battalion reconnaissance patrol requirements verbally from the battalion commander and the S3. Brigade reconnaissance patrol requirements might be received as verbal intelligence collection requests from the brigade S2 or they might come as written partial patrol orders if the brigade S2 considers the collection requirement to necessitate an additional patrol.
- TOS assisted - Battalion S2 personnel will receive TOS ICT messages that originate at division CM&D and request information that can be collected by front line units. Battalion S2 personnel will determine which requests will require reconnaissance patrols to collect the information.
- TOS assisted - Battalion S2 personnel will discover voids in our knowledge of the enemy and additional information requirements that could be answered by foot patrols when studying the current enemy situation and the battalion mission. The analyzed enemy situation will be as depicted on the S2 situation map and as provided by received TOS ESD, EOB, and intelligence summary file messages and by spot reports received from brigade and from subordinate units.
- Manual - Battalion S2 personnel will decide how many reconnaissance patrols will be required for the next night and their objectives and approximate timing based on the requirements gathered in the preceding steps. They will coordinate patrol requirements with the battalion S3 to avoid conflicts with combat patrols and other troop requirements. As many patrols as possible will be assigned to the battalion's scout platoon but some might require the use of maneuver company personnel.
- TOS assisted - Data for agreed upon reconnaissance patrols would be entered in the same division staff working file as was used for the GSR surveillance plan in the preceding task. For each patrol, file entries might be made stating the patrol type, the unit involved, the objective location, the departure time and location, and the return time and location. When both the ground reconnaissance and surveillance plans were entered in the file record, the record would be transmitted to the brigade S2. After brigade and division review of the proposed daily patrol plan, the brigade S2 might call the battalion S2 with suggested changes to the plan. Any agreed upon changes would be coordinated by the battalion S2 and entered in the staff working file.
- Manual - The battalion S2 officer will take notes on each agreed upon patrol and might draw each patrol route on a map. He will either give a face to face briefing to the patrol members or a written or verbal request to the commander of the company involved. If time and manpower permit, a complete patrol order might be written containing a statement of the enemy situation, weather, and terrain; mission execution details such as routing, timing, collection requirements, and passage of line; command and signal; and service and support.

7 February 1978

88

System Development Corporation
TM-6009/002/00

OUTPUTS

The outputs of this task are entries and updates to a TOS staff working file, written or verbal patrol orders, and various verbal communications.

7 February 1978

89

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Plans and submits requests for preplanned and immediate aerial reconnaissance.

FREQUENCY ESTIMATE: 3 or 4 times per day. In the investigated division, brigades submit most of the requests.

CRITICALITY: 3

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

- Stimuli are a new mission assignment, moving to contact, receipt of enemy fire from an unknown position, or, in general, the need to know what is going on in some area behind enemy lines that can not be efficiently investigated by organic assets or other ground based collection means.
- TOS ESD, EOB, TER, and intelligence summary file contents
- Spot reports received from subordinate units that indicate the need for aerial reconnaissance
- Battalion mission plans

COORDINATION

Inputs: ● Subordinate unit commanders
 ● Battalion commander
 ● Battalion S3
 ● Battalion air liaison officer (ALO)
Outputs: Battalion ALO, brigade S2

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- Manual - Battalion mission plans for the following day might require aerial reconnaissance flights. The battalion S2 will coordinate these requirements with the battalion commander, S3, and air liaison officer.
- TOS assisted - These preplanned air force reconnaissance mission requests might be rolled up in a TOS staff working file as described in the division R&S element description. Battalion S2 personnel would retrieve the format for the preplanned request staff working file. With the technical assistance of the battalion-attached air liaison officer, they would fill in the request data for each requested mission. When all preplanned requests have been entered in the file, they would inform the brigade S2 that the battalion entries are ready for brigade review. They should receive verbal notification of any changes made to battalion preplanned requests by brigade, division, or corps. They might also retrieve their requests after the review cycle to get a hardcopy of their approved preplanned missions as modified. If TOS is not used for rolling up preplanned requests, then they will be recorded on standard air reconnaissance forms and passed between echelons via courier.
- Manual - During the mission, spot reports will be received over the command radio net from subordinate units reporting events that require investigation by aerial reconnaissance. Also, study of the current enemy situation might uncover needs for aerial reconnaissance. The battalion S2 will use a map to determine the geographic coordinates of the search area. He will pass these coordinates plus the mission objectives and timing and any other available information to the air liaison officer in face to face communications. The air liaison officer will then complete a formal immediate air reconnaissance request form and transmit the request data over the air force immediate air request radio net. If the battalion does not have an air liaison officer, the immediate request will be sent to the brigade S2 over the brigade intelligence radio net. The brigade S2 will then do the necessary coordinating with the brigade air liaison officer.

OUTPUTS

The outputs of this task are entries to a TOS staff working file, completed air reconnaissance request forms, and verbal communications.

NOTES

- Personnel at the investigated division stated that the use of preplanned air reconnaissance requests had not been exercised at their division. They stated that the fluidity of the battlefield makes it very difficult to plan air reconnaissance missions a day in advance.
- The value of using TOS to roll up preplanned air reconnaissance requests

7 February 1978

91

System Development Corporation
TM-6009/002/00

would be in reducing the time required to transmit these plans between echelons. This should allow a later submittal and thus increase the probability that the preplanned request will still be valid at the requested flight time. However, if preplanned requests are as rare army-wide as in the investigated division then there is no need for TOS interaction and this entire task would remain manual.

7 February 1978

92

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Receives and analyzes tasking requests from higher headquarters and coordinates battalion intelligence data collection requirements.

FREQUENCY ESTIMATE: 3 or 4 times per day

CRITICALITY: 4 (see notes)

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

- EEI and OIR contained in the brigade OPORD intelligence annex
- TOS ICT messages originated by the division CM&D element
- Brigade-originated tasking requests received over the brigade intelligence radio net
- TOS ESD, EOB, TER, and intelligence summary file contents
- Verbal requests for intelligence data collection received from the battalion commander, S3, or other battalion elements

COORDINATION

- Inputs:
- Battalion commander
 - Battalion S3
 - Other battalion command post elements
- Outputs:
- Brigade S2
 - Company commanders
 - Division CM&D element

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- Manual - Battalion S2 personnel will determine which of the EEI and OIR in the brigade OPORD can be fulfilled by battalion units. Battalion S2 personnel might add local detail to these for inclusion in the battalion OPORD.
- TOS assisted - Battalion S2 personnel will receive TOS ICT messages originated by the division CM&D element which request information that can be collected by front line troops. These might be translated into patrol orders as specified in a preceding task or transmitted directly to subordinate unit commander via radio. Battalion S2 personnel should maintain hardcopies of these ICT messages so they can correlate the responses with the correct ICT number. Battalion S2 personnel will be required to enter the ICT number in any ESD message reporting the results of the requested data collection.
- Manual - Battalion S2 personnel will also receive tasking requests over the brigade intelligence radio net originated by the brigade S2. These also will be assigned as appropriate.
- TOS assisted - Requests for information will be generated as a result of battalion staff study of the enemy and friendly situations. Battalion S2 personnel will query the TOS data base to determine if the desired information already exists. If the information is not in the TOS data base, battalion S2 personnel will decide if the information can be collected by battalion assets alone or if a collection request should be sent to brigade or to division. If the data can be gathered by battalion assets, it might be included in patrol orders or transmitted via radio to subordinate unit commanders. Tasking requests to brigade level only will be sent via the brigade intelligence radio net. Tasking requests that might require division level assets will be sent to the division CM&D element as TOS ICT messages. If the battalion S2 has also submitted an air reconnaissance request to collect the same information, then they should state this fact on the ICR input to avoid duplicate air reconnaissance tasking.

OUTPUTS

The outputs of this task are EEI and OIR for the battalion OPORD, objectives for battalion-generated patrol orders, TOS ICR messages, and various verbal communications.

NOTES

The interviewee assigned a low criticality to this task because he felt that most required data would be collected without formal requests.

7 February 1978

94

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Debriefs reconnaissance and combat patrols.

FREQUENCY ESTIMATE: 3 or 4 times per day

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

- NATO patrol debriefing format
- Patrol details as told by the patrol members
- Patrol details as taken from company commander or platoon leader, if they do the patrol debriefing

OUTPUTS

- Notes taken during the debriefing
- Summary of the notes sent as a spot report to the brigade S2 over the intelligence net
- Patrol results might also be input as ESD messages addressed to any unit or element who could use the information
- A full NATO patrol report written and sent to brigade via courier or RATT if time permits

COORDINATION

- Inputs: • Patrol leader and other patrol members
 • Company commanders
- Outputs: • Brigade S2
 • Battalion staff
 • Any division unit or element on distribution for resulting TOS ESD inputs

NOTES

- Battalion S2 goes out to the patrol's return location or has the patrol brought to battalion headquarters. He asks the patrol leader to retrace the route on a map, telling everything they saw along the route. The S2 asks specific questions at various points to get needed detail in accordance

with the NATO patrol reporting format. He asks other patrol members to add details if they have any.

- A full NATO patrol report contains: size and composition of the patrol; its mission; times of departure and return; a sketch of the patrol route; a description of man-made obstacles and critical terrain features encountered; a description of the size, location, activity, name and equipment of any enemy units encountered; condition of the patrol; miscellaneous information; and conclusions and recommendations.
- Listening and observation posts are not formally debriefed. They call any observations back to the company and the company reports back to battalion.
- The actual debriefing requires the flexibility of verbal communications and does not qualify for TOS interaction. However, as stated in the outputs, TOS ESD inputs will be generated to report significant patrol findings.

7 February 1978

96

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Performs coordination necessary to provide fire support and special transportation for reconnaissance patrols.

FREQUENCY ESTIMATE: 3 or 4 times per day for fire support, much less for transportation

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

Patrol order or personal knowledge of patrol particulars

OUTPUTS

- Verbal passing of patrol coordinates and timing to the battalion fire support coordination center
- Verbal request to the battalion S3 for special transportation or equipment

COORDINATION

Inputs: None. Existing data is used

Outputs:

- Battalion fire support coordination center
- Battalion S3

NOTES

- Normal patrol transportation and communication needs are organic to the tasked organization. Only if special requirements arise will the S2 coordinate them with the S3.
- This is a coordination task requiring the flexibility of verbal communications and does not qualify for TOS interaction.

7 February 1978

97

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Plans and coordinates the combat intelligence collection effort for the battalion.

TASK: Coordinates with the battalion staff to provide support to signal intelligence elements operating within the battalion's area of responsibility.

FREQUENCY ESTIMATE: About once every three days

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2. Sometimes the S3 is the point of contact.

INPUTS

- S2 is notified by brigade S2 that an ASA signal intelligence team will be operating in the battalion area
- Signal intelligence team arrives at battalion headquarters and requests support

OUTPUTS

- Verbal request to S3 if a security force is needed
- Verbal request to S4 for messing and fuel support

COORDINATION

Inputs: ● Brigade S2
 ● Signal intelligence team
Outputs: ● Battalion S3
 ● Battalion S4

NOTES

This is a coordination task requiring the flexibility of verbal communications and does not qualify for TOS interaction.

7 February 1978

98

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S2

FUNCTION: Receives, publishes, and disseminates intelligence and intelligence-related information.

TASK: Receives, processes, and disseminates intelligence and combat information.

FREQUENCY ESTIMATE: Almost continuous

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

- Spot reports received over the battalion command radio net from subordinate units
- Patrol reports generated at battalion
- TOS ESD, EOB, TER, and intelligence summary file messages received at battalion

COORDINATION

- Inputs: ● Subordinate units
 ● Brigade S2
- Outputs: ● Battalion commander
 ● Battalion S3
 ● Other battalion staff members
 ● Subordinate units
 ● Brigade S2

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- Data transfer
- File update

PROCEDURES

- Manual - Battalion S2 personnel will receive a copy of all spot reports received from subordinate units over the battalion command radio net.

Battalion S2 personnel will read each spot report to determine if it contains intelligence-related information. They will post the appropriate reports in the S2 journal. They will determine if these combat information items should be posted on the large scale acetate situation map and if they are significant enough to be passed to higher echelons. They will also verbally inform the battalion commander, S3, or other staff members of significant reports. The same determinations will be made concerning the results of patrol debriefings as described in a preceding task.

- TOS assisted - Battalion S2 personnel will compose and enter TOS ESD messages to report significant combat information to higher echelons. They will address these messages in accordance with standing operating procedures or to whomever they feel could use the information. They will include the corresponding ICR numbers or ESD messages when they reported information answers on ICR request.
- TOS assisted - TOS ESD messages entered by adjacent and higher echelons will be output at the battalion console if the messages were addressed to battalion or if battalion has active SRIs that force these message to their console. Receipt of new entries to the EOB and TER files will depend on the same circumstances. Battalion S2 personnel might query portions of the intelligence summary staff working file to retrieve the latest division-generated estimates and conclusions concerning the enemy situation, terrain, and weather. Queries of this file, if it is kept, might occur on a periodic basis, as a result of questions asked by the brigade staff, or they might be received as retransmittals from brigade queries of the file.
- Manual - TOS intelligence messages will be posted on the large scale acetate situation map, if appropriate. They will be compared with the current situation map to attempt to determine the enemy's intentions. The battalion staff will be verbally informed of significant messages. Hardcopy of appropriate TOS messages will be passed to the battalion command radio net operator for transmittal to subordinate units. A copy of each message will be kept with the S2 journal.

OUTPUTS

The outputs of this task are TOS ESD messages, updates to the S2 situation map and S2 journal, and various verbal communications.

NOTES

- The interviewed battalion S2 stated that about 100 reports per day might be processed by his element. Although they undoubtedly arrive in spurts, this frequency would amount to an average of approximately one every 15 minutes.
- It is felt that battalion S2 elements will not be able to use the TOS graphics capability for situational displays due to limited console access.

7 February 1978

100

System Development Corporation
TM-6009/002/00

The single battalion console should be kept busy with inputs and outputs. However, graphic displays might be sent to a battalion console from another unit.

- It is also felt that TOS analysis aids will not be used much by battalion S2 elements. Battalions apparently do not perform much intelligence analysis and the console availability for such analysis is questionable.
- Presently, battalions in the investigated division input intelligence situation reports (SITREPs) to brigade every two hours. These SITREPs contain the enemy front line trace; estimated enemy losses; indicators of enemy intentions derived from spot reports and reported as codes under five possible courses of action (i.e., attack, defend, delay, withdrawal or reinforce) and a separate category for artillery indicators; and remarks reporting the S2's estimate of the situation. SITREPs should not be required under TOS. The enemy front line trace and enemy loss data should be input as ESD messages. Division estimates of the situation will be available in the intelligence summary file, if kept. It also appears that the battalion S2 will make inputs concerning enemy activity to the S3's battlefield information report (BIR) although the BIR is not sufficiently defined at this time to estimate the S2's involvement.

7 February 1978

101

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Receives, publishes, and disseminates intelligence and intelligence-related information.

TASK: Prepares the intelligence annex to the battalion OPORD.

FREQUENCY ESTIMATE: Each change in mission. Maybe every three days.

CRITICALITY: 2

DUTY POSITION: S2, Clerk Typist

INPUTS

Intelligence annex from the brigade OPORD

OUTPUTS

Intelligence annex to the battalion OPORD containing a description of the area of operation in terms of weather, terrain, and obstacles; the enemy situation in terms of disposition, strength, significant events, weaknesses, and conclusions; EEI and OIR; request to higher, adjacent, and cooperative units for information; and measures for handling captured personnel or documents.

COORDINATION

Inputs: None. Use existing data.

Outputs: Battalion S3

NOTES

- All of the data in the battalion intelligence annex are taken from the brigade or division intelligence annex. The description of the area of operation comes from division. The enemy situation and EEI and OIR are primarily from division but brigade might have added some detail. Requests to higher, adjacent, and cooperative units are very standard. Measures for handling captured personnel and documents usually reference the battalion field standing operating procedures. If time permits, the S2 will delete those portions of the brigade annex that do not apply to battalion.
- If required, the clerk typist types the annex and makes about 20 copies to give to the S3 for integration with the rest of the battalion OPORD. One copy goes to each company, one to each battalion staff element, several are sent to brigade, and some are kept as spares.

7 February 1978

102

System Development Corporation
TM-6009/002/00

- At the investigated battalion, this task consists merely of editing the written copy of the brigade intelligence annex and thus does not qualify for TOS interaction.

7 February 1978

103

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Receives, publishes, and disseminates intelligence and intelligence-related information.

TASK: Prepares and presents the intelligence portion of battalion staff briefings.

FREQUENCY ESTIMATE: Twice a day

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2

INPUTS

- OPORD intelligence annex
- TOS ESD, EOB, TER, and intelligence summary file messages received at battalion
- Spot reports received from subordinate units
- S2 situation map

OUTPUTS

Intelligence portion of the regular staff briefings

COORDINATION

Inputs: None. Existing data is used.

Outputs:

- Battalion commander
- Battalion staff
- Any other briefing attendees

NOTES

- The initial mission briefing is taken primarily from the OPORD intelligence annex. Subsequent briefings concentrate on changes in the enemy situation.
- It is not anticipated that TOS will be used at battalion to present the commander's briefing. Hardcopy of TOS messages received previously, especially intelligence summary data, will be summarized during the briefing, but TOS graphics should not be used for briefing for reasons stated in a preceding task. Rarely, battalion S2 personnel might query the TOS data base to obtain data for briefing that is not currently available at battalion.

7 February 1978

104

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Receives, publishes, and disseminates intelligence and intelligence-related information.

TASK: Supervises the distribution of maps provided by higher headquarters.

FREQUENCY ESTIMATE: Every major change of location. Very rare.

CRITICALITY: 1

DUTY POSITION: S2, Intelligence Sergeant

INPUTS

Battalion staff map requirements obtained by asking the staff elements

OUTPUTS

- Map requirements passed to the brigade S2
- Maps inventoried
- Subordinate units informed that maps are at battalion ready to be picked up

COORDINATION

Inputs: Battalion staff elements

Outputs: Brigade S2

NOTES

- If any special maps or topographical studies are needed, the S2 informs the brigade S2. When they are available, the battalion sends someone to brigade or division to pick them up or they are sent down by courier.
- This is an administrative task and thus does not qualify for TOS interaction.

7 February 1978

105

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Provides advice to the battalion commander and staff on operational security of the battalion command post.

FREQUENCY ESTIMATE: Up to 30% of the NCO's time.

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst

INPUTS

- Diagram of the proposed command post setup
- Command post guard schedule as provided by headquarters company
- Command post setup as accomplished

OUTPUTS

- Advice to the S3, or other responsible officer, suggesting changes to the proposed command post setup that would improve operational security
- Information given to battalion headquarters company concerning the security guard requirements for the command post, including approval of the guard schedule developed by the headquarters company
- Advice to the battalion commander and the responsible officer, concerning problems in operations security noted during informal checks of the command post. These typically involve camouflage, noise, and light discipline.

COORDINATION

Inputs: Headquarters company

Outputs:

- Battalion commander
- Battalion staff officers
- Headquarters company

NOTES

- Occasionally, the counterintelligence team comes down from brigade to check the battalion command post operations security.
- This is a physical investigation and close coordination task and does not qualify for TOS interaction.

7 February 1978

106

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Supervises the control and accounting of classified documents and materials.

FREQUENCY ESTIMATE: Safe checked once a day

CRITICALITY: 2

DUTY POSITION: S2, Intelligence Sergeant, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

Safe inspections are performed on a regular daily schedule

OUTPUTS

Safe inspections and completion of safe check form

COORDINATION

Inputs: None. Safe check is done on scheduled basis

Outputs: Brigade S2

NOTES

- The S2 is the security manager and the intelligence sergeant is the security custodian.
- The investigated battalion did not have classified documents above the level of confidential in the field.
- All classified documents are kept in one safe inside the vehicle.
- If a classified document cannot be found or there is reason to believe that classified information has been compromised, the brigade S2 is informed over the intelligence net. The brigade S2 sends down the counterintelligence team to investigate.
- This is an administrative task and does not qualify for TOS interaction.

7 February 1978

107

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Requests counterintelligence investigative support in instances of suspected espionage, subversion, sabotage, or compromise of classified material and supports the investigation.

FREQUENCY ESTIMATE: Very rare

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst, Clerk Typist (RTO), Personnel Carrier Driver (RTO)

INPUTS

Notification of suspected event from subordinate units or other battalion staff personnel

OUTPUTS

- Brigade S2 is informed over the intelligence net of what happened, where it happened, when it happened, and who was involved. The brigade S2 sends down the brigade-attached counterintelligence team to investigate.
- The battalion S2 officer and NCO give any assistance required by the investigating team, including area access, transportation, and answering questions.

COORDINATION

- Inputs: • Subordinate units
• Battalion staff personnel
- Outputs: • Brigade S2
• Counterintelligence team

NOTES

This is a coordination task requiring the flexibility of verbal communications and thus does not qualify for TOS interaction.

7 February 1978

108

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Administers the security clearance program.

FREQUENCY ESTIMATE: Very rare.

CRITICALITY: 2

DUTY POSTION: Intelligence Sergeant

INPUTS

Newly arrived battalion personnel

OUTPUTS

- Necessary information is taken from the newly assigned individual and a request for clearance is sent to the brigade, probably in letter format
- Clearance received from brigade

COORDINATION

Inputs: Newly assigned individual

Outputs: Brigade S2

NOTES

- The interviewed S2 had never performed this task in the field.
- This is an administrative task and thus does not qualify for TOS interaction.

7 February 1978

109

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Coordinates counterintelligence activities and services.

TASK: Checks abandoned command post locations to insure that no information or materiel of possible use to the enemy is left behind.

FREQUENCY ESTIMATE: 2 or 3 times per day

CRITICALITY: 2

DUTY POSITION: Intelligence Sergeant, Senior Intelligence Analyst

INPUTS

Stimulus is moving the battalion command post

OUTPUTS

- Intelligence Sergeant inspects the abandoned command post location, looking for anything that would be of value to the enemy as an indicator of our activity or intentions.
- If any indicator is found, it is picked up and an attempt is made to find out who left it and to make sure that it does not reoccur.

COORDINATION

Inputs: None

Outputs: Any battalion staff member

NOTES

This is a physical investigation task and does not qualify for TOS interaction.

7 February 1978

110

System Development Corporation
TM-6009/002/70

MANUAL TASK

ELEMENT: Battalion S2

FUNCTION: Assists in battalion prisoner of war interrogation activities.

TASK: Assists in battalion prisoner of war interrogation activities.

FREQUENCY ESTIMATE: Once every two days

CRITICALITY: 2

DUTY POSITION: S2, Assistant S2, Intelligence Sergeant, Senior Intelligence Analyst

INPUTS

Notification of the capture of a wounded prisoner of war or of the inability to evacuate a prisoner

OUTPUTS

- Brigade S2 is informed of the existence of prisoners who cannot be evacuated and, if possible, he dispatched the brigade-attached interrogation of prisoners of war (IPW) team to battalion.
- The battalion S2 officer and NCO arrange for any assistance required by the IPW team, such as, area access, work space, and messing.
- The battalion S2 informs the IPW team of any specific intelligence he wants from the prisoners.
- A TOS ESD message might be submitted on the results of the IPW team interrogation if they are of immediate interest and if ESD reporting of the information will not be accomplished by the IPW element at division.

COORDINATION

- Inputs: • Battalion S1
 • Subordinate units
- Outputs: • Brigade S2
 • IPW team
 • Battalion S4
 • Headquarters company commander

NOTES

- Normally, prisoners are immediately evacuated to brigade trains for interrogation and processing. Their evacuation is coordinated by the battalion S1.

7 February 1978

111

System Development Corporation
TM-6009/002/00

- This is primarily a coordination task requiring the flexibility of verbal communications. The only TOS involvement might be the output of TOS ESD messages reporting significant interrogation results.

7 February 1978

112

System Development Corporation
TM-6009/002/00

PERSONNEL

TABLE 6.
Battalion S2 Manning

<u>Title</u>	<u>Doctrinal Manning for Sustained Manual Operation</u>			<u>Recommended Manning Under TOS</u>		
	<u>Grade</u>	<u>MOS</u>	<u>Number</u>	<u>Grade</u>	<u>MOS</u>	<u>Number</u>
S2	03	35A	1	03	35A	1
Assistant S2	02	35A	1	02	35A	1
Intelligence sergeant	E8	11B	1	E8	11B	1
Senior intelligence analyst	E6	96B	1	E6	96B	1
Clerk typist (RTO)	E4	71B	1	E4	71B	1
Personnel carrier driver (RTO)	E4	11B	1	E4	11B	1
Total Officers/Enlisted Men			2/4	2/4		

This table depicts the manning a division might employ to sustain 24-hour operations in a tactically deployed manual element and the manning proposed for the element to sustain 24-hour operations using TOS. The recommendations do not provide for relief or replacement personnel.

No changes to battalion S2 manning requirements are anticipated under TOS. A shift will consist of one officer, one NCO, and one RTO.

The officers will direct the element activities, perform most planning tasks, and coordinate with other battalion staff elements. It is felt that the officers should be familiar with the TOS data base, outputs, and functions as much of the information with which they work will be resident in TOS. It is also felt that the officers should be capable of at least inputting ESD and ICR messages and hardcopying outputs to perform these tasks when the primary operators are not available.

It is recommended that the intelligence sergeant and the senior intelligence analyst, as the shift NCOs, be the primary TOS console operators for the S2 element. In this capacity, they will receive and input TOS messages and retrieve data base information as required. It might prove most efficient

7 February 1978

113

System Development Corporation
TM-6009/002/00

for the S2 shift NCO to alternate monitoring of the console with the S3 NCO instead of switching operators continually depending on the type of message being sent or received. This would require that the NCOs know both the intelligence and operations formats and data locations.

The clerk typist and personnel carrier driver would have the primary assignment of operating the brigade intelligence radio net station on their shift. They might also aid the officer and NCO in posting information. They would have no direct interaction with TOS.

RECOMMENDATIONS

The same recommendation as made in the battalion S3 element for automatic output of required TOS information is true for the battalion S2 also. It is felt that the brigade S2 can control much of the inputs to the battalion by adding them to the distribution for appropriate messages and SRIs.

7 February 1978

114

System Development Corporation
TM-6009/002/00

BATTALION OPERATIONS ELEMENT

GENERAL

The battalion operations element (S3), supervised by the battalion executive officer, is located in the battalion tactical operations center. The battalion S3 is normally located in the tactical operations center but may accompany the commander in the field as part of the command group.

The S3 element is responsible for monitoring the operational situation and developing detailed tactical operations planning. The element has overall responsibility for keeping the commander informed of the tactical situation and recommending appropriate actions to be taken, coordinating the functions of the tactical operations center, preparing for future operations, preparing and disseminating operational plans and orders, coordinating air support and coordinating tactical operations and their support.

MISSION

The mission of the S3 element is to plan, conduct, and report battalion tactical operations necessary to achieve stated missions, objectives, and maneuvers.

OVERVIEW OF TOS OPERATIONS

The S3 element will operate from the battalion tactical operations center. TOS operations will be conducted using the TOS console specified for the battalion. The single terminal must out of necessity be shared by all staff elements and in accordance with procedures and priorities established by the commander. Because of the console sharing requirement at battalion, it is anticipated that TOS will provide only the basic capability to input and output data for the system and not be utilized in a graphics capacity similar to the other echelons. The S3 element will use the TOS console to:

- receive, request, maintain, and present information concerning the battalion tactical status
- maintain records and reports
- coordinate preplanned close air support and tactical airlift requests

The TOS console will also be used to query, SRI, print, or update the FRENISIT files for operational information bearing on the battalion tactical situation.

The shift officer and operations sergeant, who is the non-commissioned officer-in-charge (NCOIC) will assemble the battalion situation map data based upon

7 February 1978

115

System Development Corporation
TM-6009/002/00

criteria specified by the S3. Lower echelon data will be received by FM net and screened for logging and plotting. When required by standing operating procedures, the manual data will be processed and loaded into the appropriate TOS file by the NCOIC. TOS data used to construct and maintain a battalion situation map is resident in the machine and is accessible by prestored query and SRI or as a result of prescribed distribution in the standing operating procedure. The higher and lower data must be assembled by the shift officer and NCOIC and transcribed on the battalion's situation map manually. The situation map becomes the basic mechanism by which the tactical situation is monitored and the commander briefed. Additional briefing data for the commander can be assembled by the shift officer through the use of the TOS prestored query. The tactical situation data must also be analyzed by the shift officer and NCOIC to develop and transmit the battlefied information report using TOS. The assembling, timing, and distribution of this report is expected to be controlled by standing operating procedures. The task is TOS assisted because it includes the accessing and updating of files and the transmission of reports required by standing operating procedures. The selection is further supported by task criticality which was rated at two.

The shift officer and NCOIC will insure that all manual and TOS data received by the battalions are properly recorded and processed. All basic battalion outputs processed by the shift officer and NCOIC should be coordinated and approved by the S3 prior to transmission to higher or lower. Data exchanges with lower will be manually recorded and transmitted using the FM net; data to higher will be transmitted by TOS and printed. Maintenance of records reflecting data input and output by the element will be a combination of TOS input/output messages augmented by a manual log of actions received and generated on the FM net. The criticality of this task is low, but the frequency of inputs and outputs are very high and should qualify as TOS assisted since this recording and correlation of reports will be the only records for historical and operational analysis purposes.

The S3 air and the NCOIC will be able to collect, consolidate, prioritize, and load close air support requests directly into the division defined staff working file for processing. Upon completion of the task, the S3 air should transmit a relay message to the brigade S3 air indicating the file has been updated and is ready for brigade review. Higher levels will then perform their processing and file adjustment, as necessary, up through and including corps. Approved flights will be loaded in the file by division and all brigades and battalions will be notified simultaneously by relay message that the file is ready for review. The S3 air can recall, print, and study the file to determine which preplanned requests were approved. He will conclude the task by coordinating with appropriate battalion and company forward air controller personnel. Tactical airlift requests will be handled basically in the same manner except battalion requests will be loaded in a brigade file for processing and resolution. Battalions will be notified by relay message

7 February 1978

116

System Development Corporation
TM-6009/002/00

from brigade and/or division on the status of their requests. This task was selected for TOS assistance because the task is done routinely every day and its processing time can be extremely improved through the use of TOS. By shortening the processing time, battalions are permitted more time to do target selection. Task also qualified because of its criticality rating which is two.

The S3 element will also be expected to use the console to query the data for information pertaining to the tasks cited and others defined by the S3. They will also be expected to use TOS information to perform other tasks which have not been specifically identified as TOS assisted but can be supported by TOS. Interface with the data base will be required to obtain significant pieces of information required, to update or delete information from a file required by the S3, and to build any staff working files necessary to conduct tactical operations. Operations staff personnel will also be expected to support moving the equipment when required, reinstall it, complete the communications hookup, power the console, insert paper in the printer, perform system checkouts, and perform malfunction reporting.

FUNCTIONS AND TASKS

Functions and tasks performed by the brigade intelligence element are addressed in this section. A matrix of the tasks and duty position relationships, indicating which tasks will remain manual and which will be TOS assisted, is included as Table 7.

Following the table are task description forms, one for each task, stating whether the task is manual or TOS assisted and providing information about frequency estimate, criticality, duty position affected, inputs to the task, coordination requirements, and task outputs. For tasks which are TOS assisted, the man/machine interface requirements are listed and procedures for performing the task are discussed.

7 February 1978

117
(Page 118 b)

TABLE 7.
Battalion S3 Element Position

FUNCTIONS AND TASKS	S3	Assistant S3 Air	Assistant S3	Oper Serg
Keeps the commander, staff, higher and lower echelons informed of the tactical situation and recommends to the commander actions to be taken to accomplish the battalion missions.				
Receives , requests , maintains , and presents information concerning the tactical and operational status of the battalion including attached and supporting units.		(X)	(X)	
Analyzes the mission, situation, and available resources to determine the optimum means and methods of achieving the battalion's mission	X	X	X	
Recommends to the commander appropriate tactical employment of units and utilization of resources to achieve the battalion's mission.	X	X	X	
Coordinates and supervises the functions of the tactical operations center.				
Coordinates and supervises the functions of the S3 element.	X	X	X	
Coordinates the TOC interstaff functions.		X	X	
Coordinates activities of assigned and attached liaison personnel.	X	X	X	
Maintain records and reports for the TOC.		(X)	(X)	
Prepares for future operations.				
Analyzes and determines probable future tactical situation based on command guidance.	X	X	X	

TABLE 7.

3 Element Positions, Functions, and Tasks

Assistant S3	Operations Sergeant	Assistant Operations Sergeant	Clerk Typist	Personnel Carrier Driver	Senior Radio Operator	Radio Operator	Light Vehicle Driver	Chemical Staff NCO
-----------------	------------------------	-------------------------------------	-----------------	--------------------------------	-----------------------------	-------------------	----------------------------	--------------------------

(X)	(X)	(X)	(X)	X	X	X	X	X
X								
X								
X								
X								
X								
(X)	(X)	(X)	(X)	X	X	X	X	X
X	X	X						X

7 February 1978

119
(Page 120)

TABLE
Battalion S3 Element Position

FUNCTIONS AND TASKS	S3	Assistant S3 Air	Assistant S3	Ope Ser
Coordinates plans and alternative courses of action.	X	X	X	
Supervises the preparation of operational plans and orders and disseminates plans and orders to higher and lower echelons.				
Prepares the order and air support appendix of the fire support annex.		X	X	
Supervises the preparation of the communications annex, the air defense annex, the fire support annex, and coordinates with other staff and supporting elements for the supporting annexes to the order.	X	X	X	
Collects and correlates inputs, resolves conflicts, and publishes the order.	X	X	X	
Disseminates the plans and orders to the staff and higher and lower echelons.	X	X	X	
Supervises and coordinates tactical operations and their support.				
Supervises and coordinates the employment of subordinate tactical units.	X	X	X	
Supervises and coordinates fire support with the scheme of maneuver.		X	X	
Coordinates combat support.		X	X	

TABLE 7. (Continued)

3 Element Positions, Functions, and Tasks

Assistant S3	Operations Sergeant	Assistant Operations Sergeant	Clerk Typist	Personnel Carrier Driver	Senior Radio Operator	Radio Operator	Light Vehicle Driver	Chemical Staff NCO
X								
X	X	X	X					
X								X
X	X	X	X					
X	X	X						
X	X	X	X	X	X	X	X	X
X								
X								

7 February 1978

121
(Page 122)

TABLE 7
Battalion S3 Element Position

FUNCTIONS AND TASKS	S3	Assistant S3 Air	Assistant S3	Oper Serp
Supervises and coordinates requests for air support.				
Coordinates preplanned close air support and tactical airlift requests.		(X)	(X)	
Approves and disapproves immediate air requests.	X	X	X	
Performs the hookup, energizing, initialization, and checkout of the TOS console.				
<hr/> X - Manual Task (X) - TOS Assisted Task				

121
(Page 122 blank)

System Development Corporation
TM-6009/002/00

TABLE 7. (Continued)
S3 Element Positions, Functions, and Tasks

Assistant S3	Operations Sergeant	Assistant Operations Sergeant	Clerk Typist	Personnel Carrier Driver	Senior Radio Operator	Radio Operator	Light Vehicle Driver	Chemical Staff NCO
-----------------	------------------------	-------------------------------------	-----------------	--------------------------------	-----------------------------	-------------------	----------------------------	--------------------------

(X)

(X)

(X)

(X)

X

(X)

X

7 February 1978

123

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S3

FUNCTION: Keeps the commander, staff, and higher and lower echelons informed of the tactical situation and recommends to the commander actions to be taken to accomplish the battalion missions.

TASK: Receives, requests, maintains, and presents information concerning the tactical and operational status of the battalion, including attached and supporting units.

FREQUENCY ESTIMATE: 3 to 4 daily

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer, NCOIC, RTO, Chemical NCO

INPUTS

- Copies of all situation and spot reports received by the RTO
- Intelligence reports from the S2
- Status reports received from the S1 and S4

COORDINATION

- Staff
- Special staff
- Companies
- Brigade S3

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Data transfer

PROCEDURES

- Manual - The S3 will specify the display criteria for the battalion plotting boards. The shift officer and NCOIC will determine whether the data can be obtained from lower echelons by FM radio or from higher headquarters using TOS.
- Manual - The radio telephone operators will receive and record all lower echelon data using the standard spot report format. The RTO will annotate

the distribution on the message and give it to the operations sergeant for distribution. Basic distribution will include the shift officer, S1, S2, S4, and engineer platoon.

- Manual - The shift officer and NCOIC should read and post all required data on the plotting board. Significant events will be brought to the attention of the S3 immediately.
- TOS assisted - The shift officer and NCOIC will initiate a prestored query and/or SRI of the TOS data base to obtain plotting board data not available from lower echelons. Data sets might include but are not limited to: brigade boundaries, coordinating points, objectives, command post locations, and any other data relevant for situation monitoring. Files to be examined include: battlefield information report, tactical disposition, task organization, terrain, enemy order of battle, and other relevant staff working and display files. These data would be output on the printer and transcribed to the plotting board manually by the shift officer or NCOIC.
- TOS assisted - All lower echelons data which must be inserted into TOS will be processed by the NCOIC and coordinated with the shift officer. These data might include CP locations, boundaries, obstacles and barriers, radiation exposures and other battalion data resident in TOS files.
- TOS assisted - Data for a commander's briefing could be gathered from TOS using a prestored query. Items for the query would have to be specified by the S3 and inserted by NCOIC. The data from the query would be printed and used by the S3 in summary form or in conjunction with the situation map. It must be assumed that the prestored query would be used to access data from both the ENSIT and FRENSIT files.
- TOS assisted - The S3 and shift officer will be required to assemble situation data for the periodic and emergency BIR. The data will be coded in accordance with TOS formats and provided by the NCOIC for transmission. Timing and distribution for the report should be specified by standing operating procedures.

OUTPUTS

The output of this task is the updating of all files, developing and updating of the basic situation map and briefing the commander. The task also includes preparation and dissemination of the battlefield status data such as the BIR.

NOTES

- It is expected that little if any situational data will be displayed on the consoles since there is only one and it must be shared by all staff agencies. Situational data used by battalion will consist of their own manual maps or the TOS displays transmitted to them and output on their printer.
- Because of only one console, it is logical to assume that the S2 and S3 should share the burden of manning it since they will be the principal users. The S2 and S3 NCOIC(s) are suggested as the principal operators backed up by the shift officers.

7 February 1978

125

System Development Corporation
TM-6009/002/00

- Verbal inputs provided by the special staff officers will probably be reflected on the situation map but not reflected in battalion logs.
- Friendly map situation data will normally consist of locations, boundaries and objectives; enemy situation data is likely to include locations, sightings and strengths.

7 February 1978

126

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Keeps the commander, staff, and higher and lower echelons informed of the tactical situation and recommends to the commander actions to be taken to accomplish the battalion mission.

TASK: Analyzes the mission, situation, and available resources to determine the optimum means and methods of achieving the battalion's mission.

FREQUENCY ESTIMATE: 3 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

- Higher plans and orders
- Task organization
- Enemy situation
- Friendly situation
- Commander's guidance

OUTPUTS

- Sets of alternative courses of action to satisfy probably or anticipated missions
- TOS impact - The task is basically manual but a TOS staff working file could be used to store various courses of action if there were more than one. The file could be recalled, printed and used for the course of action briefing with the commander. The tactical disposition planning file could also be used if it were essential to build an operations overlay for the commander.

COORDINATION

S1, S2, S4, engineer, tactical air control party (TACP), Fire Support Officer (FSO), air defense artillery (ADA), higher headquarters

NOTES

- Potential missions are usually resident in higher plans which are studied in detail.
- Courses of action are not normally formalized and put in writing. Some

7 February 1978

127

System Development Corporation
TM-6009/002/00

data may be annotated on the situation map. These recommendations form the basis for an alternative course of action briefing for the commander.

- Verbal solicitations of input from the staff involving current status, capabilities, and support are normally made. The S3 solicits objections to his course of action and missions.
- The course of action are usually different maneuver plans to achieve stated objectives or missions.

7 February 1978

128

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Keeps the commander, staff, and higher and lower echelons informed of the tactical situation and recommends to the commander actions to be taken to accomplish the battalion missions.

TASK: Recommends to the commander appropriate tactical employment of units and utilization of resources to achieve the battalion's mission.

FREQUENCY ESTIMATE: 3 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

Alternative courses of action developed in preceding task. There are presented in a briefing to the commander by the S3 and supported by other staff personnel.

OUTPUTS

- Selection of the most appropriate course of action by the commander (Decision briefing)
- TOS impact - The only possible TOS implication is that the course of action could change the unit(s) task organization and location. If this were to happen, the S3 must insure that the division files are updated appropriately.

COORDINATION

- S1, S2, and S4 will present their portion and support to the courses of action
- The other special officers will also be available if necessary

NOTES

- During the course of action briefing, S3 will solicit amplifying data and guidance from the commander to be included in the fragmentary order. The plan presented will be self supporting and modified by the commander as desired.
- All tasked organizations will be used to develop the plan and all assets must have a mission regardless of the stated objective.

7 February 1978

129

System Development Corporation
TM-6009/QQ2/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Coordinates and supervises the functions of the tactical operations center (TOC).

TASK: Coordinates and supervises the functions of the S3 element.

FREQUENCY ESTIMATE: As required.

CRITICALITY: 3

DUTY POSITION: S3, Shift Officer

INPUTS

- Mission interpretation
- TOC location selection
- Set up tactical operating center complex
- Initiate communications
- Initiate operations
- Standard SOPs

OUTPUTS

- Initiation of the TOC
- Establishment and maintenance of operations
- TOS impact - Discontinuation of console operations must be coordinated with the SYSCON and the brigade S3. Upon reestablishing the tactical operations center at the new location, the division files must be updated to reflect the change.

COORDINATION

- Communications officer
- Operations sergeant
- SYSCON

NOTES

- S3 is basically responsible for command post location selection and coordination with the commander.
- Operations sergeant is basically responsible for all moving and maintenance for the S3 portion of the tactical operations center (disassembly, assembly, supervision of enlisted men).

7 February 1978

130

System Development Corporation
TM-6009/002/00

- Shift officer is normally in a position to monitor and directly supervise the tactical operations center S3 personnel.

7 February 1978

131

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Coordinates and supervises the functions of the tactical operations center (TOC).

TASK: Coordinates the TOC interstaff functions.

FREQUENCY ESTIMATE: Undetermined

CRITICALITY: 2

DUTY POSITION: Shift Officer

INPUTS

Verbal sharing by the staff of inputs, actions, and outputs of interest to the S3 that require his coordination. Items such as:

- Intelligence indicators
- Spot reports
- Flash situation reports
- NBC reports
- Air support
- Support requests

Typically the items of interest to staff will be manual from below and automated from above.

OUTPUTS

- Sharing of reports and information received
- Provide information requested
- An operational response
- Reports to higher headquarters
- TOS impact - The sharing of inputs with higher may involve considerable TOS impact, such as the updating of files and displays and submission of reports such as the BIR.

COORDINATION

- Staff
- Special staff
- Higher headquarters
- Lower headquarters

7 February 1978

132

System Development Corporation
TM-6009/002/00

NOTES

- Very little data, if any, is typed or written. The journal is probably the only source for written data.
- Operations sergeant will insure that all incoming and outgoing messages receive the proper distribution.
- Reports or requests to division are prepared by the shift officer and given to the operations sergeant. Data is logged into the journal and provided to the RTO for transmission.
- Data transmitted to companies will be passed manually on the battalion FM net. Information to brigade will be passed one of two ways: if manual by brigade FM net or if automated via TOS.

7 February 1978

133

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Coordinates and supervises the functions of the tactical operations center (TOC).

TASK: Coordinates activities of assigned and attached liaison personnel.

FREQUENCY ESTIMATE: 50 times a day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

S3 will provide precise mission requirements and expect to receive planning data, status reporting, and other information, depending on individual tasking.

OUTPUTS

Planning of real time data (time sensitive or tactical) is provided to the S3 in terms of capabilities or status of tactical operations and significant events. Data exchange might include such items as:

- Sortie availability
- Targeting
- Damage assessment
- Weapons availability
- Barriers and obstacles
- Minefields
- TOS impact - TOS will have no impact on this battalion task because its accomplished manually within the staff. Outputs could however impact TOS files and have to be updated using the TOS consoles.

COORDINATION

- Fire support officer
- Air liaison officer
- Engineer

NOTES

- Majority of data passing from the liaison officers to the S3 or shift officer is verbal. Data to be recorded is given to the operations sergeant.
- The data provided to the S3 can be either support planning for future missions or data for monitoring an existing operation.

7 February 1978

134

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S3

FUNCTION: Coordinates and supervises the functions of the tactical operations center.

TASK: Maintains records and reports for the TOC.

FREQUENCY ESTIMATE: 100 per day

CRITICALITY: 3

DUTY POSITION: Shift Officer, Operations Sergeant, RTO, Chemical NCO

INPUTS

- Subordinate unit requests or report on FM net
- Higher headquarter reports or request by TOS
- Local staff reports

COORDINATION

- RTO
- S2 NCOIC
- Special staff as required
- Higher and lower as required

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Data transfer

PROCEDURES

- Manual - All reports received from lower echelons by the RTO(s) will be received in a standard spot report format. Input data received on the FM net ranges from reports, requests for instructions, directives and general sharing of information. Incoming FM data will be channeled through the operations sergeant for the appropriate logging and distribution.
- TOS assisted - All incoming TOS data will be output on the printer. The operations sergeant will again insure that appropriate logging and distribution is accomplished.
- Manual - The shift officer will review all incoming data and insure the appropriate posting of data. The shift officer and NCOIC will do the basic

7 February 1978

]35

System Development Corporation
TM-6009/002-00

preparation and coordination of all S3 elements output to lower and higher headquarters.

- Manual and TOS assisted - All basic outputs developed by the shift officer and NCOIC should be coordinated with the S3 before transmission to higher and lower. It must be assumed that only the more important items will require S3 approval. Responses or directives for lower echelons will be prepared by the shift officer and provided to the RTO for transmission on the battalion's FM net. All TOS file updates and reports for higher will be provided to the NCOIC by the shift officer for assembly and transmission on the TOS console.

OUTPUT

The output of this task is the basic processing and outputting of required responses, directives, reports and file updates necessary to keep higher and lower informed. Secondary importance is the maintenance of records reflecting data input and output by the element. Records in all likelihood will be a combination of TOS input/output messages augmented by a manual log of actions received and generated.

NOTES

- The NCOIC should be designated as a basic console operator and share the duty with the S2 NCOIC. It would also be appropriate to train an additional enlisted man to operate the console to act as a substitute should the need arise. The shift officer should also be console trained.
- If as suggested in the task, all company data is reported using a standard format. The shift officer and NCOIC may be expected to do considerable reformatting of data to satisfy brigade and/or TOS requirements. NBC data may be a good example, such a report coded for spot report could not be appropriate for an NBC 1 or 4 report and must be reformatted to be passed either manually or by TOS.

7 February 1978

136

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Prepares for future operations.

TASK: Analyzes and determines probably future tactical situations based on command guidance.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer, NCOIC, Chemical NCO

INPUTS

- Situation map
- Spot reports
- Task organization
- Personnel and equipment status
- Brigade plans
- Brigade warning orders
- Commander guidance

OUTPUTS

- Tentative planning data or responses overlaid on the current situation map
- TOS impact - TOS will have minimal impact on this task. The task organization and brigade plans and warning orders may be provided via TOS but the basic analysis and recording of data for planning will remain manual.

COORDINATION

- S1 and S4 provide needed data on personnel and equipment estimates
- Other staff and liaison personnel may be called on to provide data on combat support capabilities

NOTES

Task is oriented toward possible missions or objectives. No formal output exists, but the missions or objectives may be overlaid on the situation map. Planning would normally consider:

1. Enemy forces
2. Friendly forces
3. Attachment/detachment

7 February 1978

137

System Development Corporation
TM-6009/002/00

- 4. Assumptions
- 5. Missions
- 6. Execution
- 7. Concept of operations
- 8. Critical situations

7 February 1978

138

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Prepares for future operations.

TASK: Coordinates plans and alternative courses of action.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

- Situation map
- Contingency considerations
- Tactical situation

OUTPUTS

- Upgrade or update the planning portion of the operations situation map
- Coordinating warning order
- Tactical directives
- TC impact - There will be no impact on this task.

COORDINATION

- Staff, plus the fire support officer, air liaison officer, and engineer.
- Commander

NOTES

- This task is a continuation of the previous task and will be initiated when probable objectives and/or tactical situations have been identified.
- Staff is consulted for basic support, concurrence, and objectives to the developed plan. This is accomplished in an informal staff meeting.
- The commander is appraised and the course of action is set (could be more planning, issuing a warning order, or a directive action).

7 February 1978

139

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises the preparation of operations plans and orders and disseminates plans and orders to higher and lower echelons.

TASK: Prepares the operations order and the air support appendix of the fire support annex.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer, NCOIC, Chemical NCO, Clerk Typist

INPUTS

- Commander's course of action or guidance provides the basic direction for preparing the operations order
- Brigade operations order

OUTPUTS

- Basic layout of the operations order overlay
- TOS impact - The task is intended to remain manual, however, TOS can be accessed to extract the brigade overlay and the basic division order and overlay if required. There is no intent to generate the battalion overlay using TOS.

COORDINATION

- Commander and staff
- Brigade S3

NOTES

- Operations order development is not a day to day operation. Fragmentary orders are more common.
- Brigade operations orders tend to be written; from battalion down they are usually verbal and followed up in writing if required.
- Basic order and annex A operations overlay is prepared by the S3 prior to the staff meeting. S3 (air) prepares the air support appendix and provides it to the fire support officer.

7 February 1978

140

System Development Corporation
TM-6009/002/00

- Operations sergeant assists the S3, and shift officer and prepares the operations order overlay for the staff meeting. Usually he is assisted by the other enlisted personnel. Preparation of the operations order may or may not occur because operations and fragmentary orders at the battalion level can be verbal. However, the operations overlay will be produced in sufficient quantities for distribution to the staff and down to the company level.

7 February 1978

141

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises the preparation of operations plans and orders and disseminates plans and orders to higher and lower echelons.

TASK: Supervises the preparation of the communications annex, the air defense annex, and the fire support annex, and coordinates with other staff and supporting elements for the supporting annexes to the operations order.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 2

DUTY POSITION: S3, Shift Officer

INPUTS

Basic operations order and overlay, plans, and additional guidance

OUTPUTS

- Required annexes to support the basic operations order and overaly
- TOS impact - None for this task.

COORDINATION

- S1
- S2
- S4
- Engineer
- Fire support officer
- Air liaison officer
- Air defense artillery
- Communications and electronics

NOTES

- Staff annexes are normally one or two pages and an overlay
- Basic guidance concerning annex development will be provided at a staff meeting. Basic operations order handout to the staff will likely include basic task organization, situation (enemy and friendly) mission, execution, service support, and command signal guidance.
- S3 has the basic responsibility for operations order development and sign off.

7 February 1978

142

System Development Corporation
TM-6009/002/00

- The operations order usually consists of:

Task organization

1. Situation: enemy and friendly
2. Mission
3. Execution (assignment of tasks by organization)
4. Service support (S1 and S4 annexes)
5. Command and signal (communications annex)

7 February 1978

143

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises the preparation of operations plans and orders and disseminates plans and orders to higher and lower echelons.

TASK: Collects and correlates inputs, resolves conflicts, and publishes the operations order.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 3

DUTY POSITION: S3, Shift Officer, Operations Sergeant, Clerk Typist

INPUTS

- Staff liaison
- Annexes and overlays

OUTPUTS

- Consolidated operations order overlays and annexes in the appropriate numbers
- TOS impact - None

COORDINATION

S3

NOTES

- Annexes usually contain one or two pages plus overlays for staff.
- Data provided is mostly handwritten.
- Operations sergeant will coordinate all conflicts with the S3 as they occur during assembly.
- S3 will resolve all conflicts.
- Operations sergeant will supervise production by enlisted personnel to appropriate numbers of overlays and the operations order are produced.

7 February 1978

144

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises the preparation of operations plans and orders and disseminates plans and orders to higher and lower echelons.

TASK: Disseminates the operations plans and orders to the staff and higher and lower echelons.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 3

DUTY POSITION: S3, Shift Officer, NCOIC

INPUTS

- Assemble lower echelon commanders
- Assemble the battalion staff

OUTPUTS

- Distribution of the operations order and overlays to the staff and lower echelons
- Distribute order to brigade
- TOS impact - None

COORDINATION

- Brigade
- Company commanders
- Staff
- Liaison officers

NOTES

- S3 has the basic responsibility for operations order sign off and distribution.
- Issue the order and brief the troops. Questions and conflicts will be resolved at the briefing and annotated accordingly.

7 February 1978

145

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises and coordinates tactical operations and their support.

TASK: Supervises and coordinates the employment of all subordinate tactical units.

FREQUENCY ESTIMATE: Continuous

CRITICALITY: 1

DUTY POSITION: Commander, S3, Shift Officer, NCOIC, RTO, Chemical NCO

INPUTS

- Situation reports
- Spot reports
- Face to face contact with field units
- Situation map

OUTPUTS

- Active adjustment or changes to maneuvering forces on the battlefield, such as combat, preparing defenses, road marches, recons, and moves to defense (real time modifications to the operations order).
- TOS impact - None

COORDINATION

- Staff
- Lower echelon commanders

NOTES

- Shift officer and operations sergeant will screen all inputs and provide priority spot and situation reports and requests for support to the commander and S3.
- The actual planning of battlefield adjustments may be done by the commander and S3 in the field in a face to face situation or in the tactical operations center using critical reports (FM net and situation map).
- This task involves the monitoring and maneuvering of field units.
- This task involves taking of spot and situation reports by the RTO, logging by the operations sergeant, and posting the situation map by the shift officer.

7 February 1978

146

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises and coordinates tactical operations and their support.

TASK: Supervises and coordinates fire support with the scheme of maneuver.

FREQUENCY ESTIMATE: 50 per day

CRITICALITY: 2

DUTY POSITION: Shift Officer, Fire Support Officer, Air Liaison Officer

INPUTS

Fire support requests from maneuvering units

OUTPUTS

- Fire missions for close air support field artillery, and/or heavy mortar which are identified by companies or battalions. Request to brigade for support will be made if the target cannot be handled through local artillery or air channels. The request may also be going up the TACFIRE channel to DIVARTY.
- TOS impact - None

COORDINATION

Fire support will be coordinated and provided by the best weapon selection as determined by the fire support officer, air liaison officer, or heavy mortar personnel.

NOTES

- This task is oriented toward providing specific fire support on targets identified by maneuvering units.
- Fire support may be initiated at either the company or battalion level.
- Requests that cannot be handled by battalion will go to brigade and higher if necessary. Up channel reporting may also be occurring in TACFIRE up to DIVARTY.

7 February 1978

147

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises and coordinates tactical operations and their support.

TASK: Coordinates combat support.

FREQUENCY ESTIMATE: 5 times per day

CRITICALITY: 2 or 3

DUTY POSITION: Shift Officer

INPUTS

- Company requests for combat support (FM net)
- Battalion developed needs for combat support

OUTPUTS

- Direct tasking of the engineering platoon for support
- Request to brigade for additional combat support requirements
- TOS impact - None intended although serious requests could be included as part of the battalion BIR and reported accordingly

COORDINATION

- Engineer platoon leader
- Brigade (FM net)

NOTES

- Shift officer will coordinate combat support with the engineering platoon leader in the areas of (1) obstacles, (2) mines, (3) craters, (4) roads. These tasks may be accomplished by the engineers to support mobility or countermobility of the battalion.
- Shift officer will be provided guidance by the S3 or in response from the units.
- Tasks are accomplished verbally.
- Electronic warfare could also fall in this category and could involve the S2. The request for support would still go forward to brigade.
- Military police support could also come into play.

7 February 1978

148

System Development Corporation
TM-6009/002/00

TOS ASSISTED TASK

ELEMENT: Battalion S3

FUNCTION: Supervises and coordinates requests for air support.

TASK: Coordinates preplanned close air support and tactical airlift requests.

FREQUENCY ESTIMATE: 1 per day

CRITICALITY: 2

DUTY POSITION: Shift Officer, NCOIC, Clerk Typist

INPUTS

Close air support requests generated by companies or the S3 air.

COORDINATION

- Brigade S3 air
- Battalion forward air controller
- S3
- ALO

MAN/MACHINE INTERFACE REQUIREMENTS

- Menu selection
- File access
- File update
- Data transfer

PROCEDURES

- Manual - The S3 air will assemble company requests and develop battalion requirements for preplanned requests. These inputs must be organized, prioritized, and prepared for TOS input. Company requests for airlift support will also be assembled by the S3 air and prepared for TOS input. Preplanned requests should be discussed and coordinated with the air liaison officer.
- TOS assisted - The NCOIC will access the division preplanned close airlift support staff working file and enter the battalion requirements at the time specified by standing operating procedures. When the file entry is completed, the NCOIC should generate a relay message to the brigade S3 air indicating the file is completed and ready for review. The NCOIC should also access the brigade airlift support staff working file and load any

7 February 1978

149

System Development Corporation
TM-6009/002/00

outstanding company or battalion request for support. The brigade S3 air should be put on distribution since the staff working file cannot be SRled.

- TOS assisted - The battalion S3 air will be notified via relay message by the division G3 air when the preplanned file has been updated and approved flights are available for review. Upon completing the file review, the S3 air should notify companies by FM net of the approved flights and coordinate with the battalion forward air controller of approved routes so that he can coordinate with the company controller who will guide the fighters to their targets.
- TOS assisted - The brigade and battalion S3 air will be appraised by the division G4 on the status of their airlift support requests by relay message. If the request is disapproved, the brigade S3 will access the file and indicate the request was disapproved. If approved, the battalion S3 air will access the file at the conclusion of the flight and annotate the success or results of the flight and closeout the request.

OUTPUT

The output of this task is the processing of preplanned airlift and close air support mission in support of the maneuvering battalion and companies.

NOTES

Airlift requests follow the same basic pattern as the close air support requests but enter the G4 element at division for resolution.

7 February 1978

150

System Development Corporation
TM-6009/002/00

MANUAL TASK

ELEMENT: Battalion S3

FUNCTION: Supervises and coordinates requests for air support.

TASK: Approves and disapproves immediate air requests.

FREQUENCY ESTIMATE: As required

CRITICALITY: 1 or 2

DUTY POSITION: S3, Shift Officer

INPUTS

Requests are initiated at company or battalion level and go straight to DASC on immediate air request net

OUTPUTS

- Approves immediate close air support missions and results
- TOS impact - None

COORDINATION

- S3
- Air liaison officer
- Forward air controller (FAC)

NOTES

- Requests may be disapproved at any level.
- Company without a FAC will get on the battalion command net and make the request. S3 air will initiate the request.
- Silence at every level constitutes approval.
- FAC will handle the approved flight. The approved flight will have:
 1. Call sign and frequency
 2. Type of aircraft
 3. Target (description and coordinates)
 4. Ordnance
 5. No-later-than time
- FAC will also attempt to provide feedback data on the mission by providing a spot report.

7 February 1978

151

System Development Corporation
TM-6009/002/00

PERSONNEL

TABLE 8.
Battalion S3 Manning

<u>Title</u>	<u>Doctrinal Manning for Sustained Manual Operation</u>			<u>Recommended Manning Under TOS</u>		
	<u>Grade</u>	<u>MOS</u>	<u>Number</u>	<u>Grade</u>	<u>MOS</u>	<u>Number</u>
S3	04	54A	1	04	54A	1
Assistant S3 air	03	54A	1	03	54A	1
Assistant S3	03	54A	0	03	54A	1
Operations sergeant	E8	11B50	1	E8	11B50	1
Assistant operations sergeant	E7	11B40	1	E7	11B40	1
Clerk typist	E4	71B30	1	E4	71B30	1
Personnel carrier driver	E4	11B1U	1	E4	11B1U	1
Senior radio operator	E4	05E20	1	E4	05E20	1
Radio operator	E3	05E20	1	E3	05E20	1
Light vehicle driver	E3	11B10	1	E3	11B10	1
Chemical staff NCO	E6	54E40	<u>1</u>	E6	54E40	<u>1</u>
Total Officer/Enlisted Men			2/8			3/8

This table depicts the manning a division might employ doctrinally to sustain a 24-hour capability in a tactically deployed manual element and an estimated affect TOS might have on that manning.

The assistant S3 air and the additional assistant S3 will fill in the basic responsibility of the shift officer for the two twelve-hour shifts. They will supervise the crew, develop display criteria, supervise plotting, analyze the situation display, prepare courses of action, prepare the operations order, direct file updating, process battalion requests, and operate the TOS console as may be required. The E8 and E7 will fill the basic responsibility of crew NCOIC for the two shift operation. They should also be the principal TOS operators for each shift and work very closely with the shift officers. The NCOICs should also share console responsibilities with their S2 counterparts and provide overall supervision of the other enlisted personnel. The clerk typist should provide all administrative service for the element in the

7 February 1978

152

System Development Corporation
TM-6009/002/00

area of operations order/fragmentary order, records, logs and data posting to support the NCOICs. The clerk typist could also be TOS trained to provide a crew backup if needed. The drivers and radio operators provide the required number of personnel to man the two FM nets for both 12-hour shifts. The chemical NCO is attached to the element and can provide guidance on the use of chemical situation. There appears to be no significant factors which would justify increasing or decreasing the S3 element. The addition of the assistant S3 has little to do with TOS and is needed to support the two 12-hour shift concept under either manual or TOS operations.

RECOMMENDATION

1. Provide battalion staff data automatically with TOS.

The single TOS console at battalion poses a potential staff access problem. The S2 and S3 are anticipated to be the principal users of the system but other regular and liaison staff personnel may have a need to access the system to provide and obtain information from the data base. It is suggested that a complete survey of battalion staff data needs be made and that TOS provide these data automatically. This would eliminate the necessity to be constantly accessing the console to obtain data and permit the console to be used primarily in an input device role.